

ROBERTS & PORTER, INC. - Lithographers Supplies

ROBERTS & PORTER, INC.

Chicago

New York

Detroit

Boston



1897 - FIFTIETH ANNIVERSARY - 1947

**Equipment • Supplies
Chemicals
*For the Graphic Arts***



Price List

SEPTEMBER, 1947

ROBERTS & PORTER, Inc.

Offices and Warehouses in

CHICAGO 7, ILL. NEW YORK 14, N. Y. DETROIT 1, MICH. BOSTON 10, MASS.
402 So. Market St. 622 Greenwich St. 481 W. Columbia Ave. 88 Broad St.
Wabash 6935 Canal 6-1646 RAndolph 8820 Hancock 8654

Lithographed in U. S. A.

TO COMMEMORATE

OUR

50th Anniversary

1897 — 1947

Ever since our late Messrs. Charles S. Roberts and Fred Porter purchased the Henry Griem Litho. Roller Works (founded in 1857) back in 1897 — to start the firm of Roberts & Porter in the lithographing supply field — it has been our earnest desire to furnish lithographers with top grade materials.

Through the years we have added to our line — always watchful of quality, and aware of the standards established by an exacting industry. Today — we submit to you a catalogue containing over four hundred items, as against perhaps a dozen at the turn of the century, when our stock consisted principally of Leather Rollers, Molleton, and Litho Flannels.

Four Great Plants — Chicago — New York — Detroit — and Boston — offer you as complete a line of pressroom, plate-making, and camera supplies and equipment as it has been possible to assemble — under the "ROBPORT" trade-mark. Still more will be available in the months — and the years to come. We are 50 years young — and have just begun to grow!

May we merit your support always.

Respectfully yours,

ROBERTS & PORTER, INC.

Hugh R. Adams, Jr.

President

THE ROBERTS AND PORTER LABORATORY

In the early spring of 1943 Roberts and Porter completed its new laboratory. This was the decision of the company officers as they felt that better practical control of products was necessary to maintain the standard of quality for which the name ROBPORT stands.

The lab was equipped with standard platemaking equipment in addition to a considerable investment in analytical instruments. The lab is dedicated to analyzing the everyday problems of our accounts rather than to theoretical research or developments of new formulas.

As a result we look back at a fine record of solving plate and press problems, aiding in the analysis of local situations, and setting up of standard procedures in over 85 plants. Members of the lab have travelled well over 100,000 miles to be in plants asking for this help and in addition have been hosts to more than 50 platemakers and pressmen who have come from distant cities to learn more of the mysteries of the jobs they do.

Another function of the laboratory is the distribution of knowledge gained from this work, and in this line educational talks have been made before numerous National Conventions of the National Association of Photo Lithographers, almost all of the local Lithographers Clubs, and District Printing House Craftsmen Conventions as well as local meetings of the Printing House Craftsmen. This service is always available to any Graphic Arts Group desiring a speaker on Lithographic subjects, and arrangements can be made with the Chicago office of Roberts and Porter. Numerous articles are also written for the National Trade Journals such as the Modern Lithography Magazine, The National Lithographer, The Inland Printer, The Lithographers Journal, and the Canadian Printer and Publisher. This is in line with the ROBPORT policy of making all basic knowledge available to the trade as soon as it will benefit the average individual or firm.

You are invited to use the facilities of the lab at any time that you feel the equipment and knowledge of our personnel will benefit your immediate problem or long range program of improvement. As a valuable account of Roberts and Porter we want you to know that we are ready to help you at any time you command, and to back up the products we've been privileged to place in your plant.

THE ROBERTS AND PORTER ERCOUBE



In order to move sales and technical personnel to a given city as quickly as possible, Roberts and Porter has added the very latest type of a personal plane to its facilities.

It is the aim of our organization to provide prompt placing of our technical men in the plants requesting this servicing and, with distances almost prohibitive, the Ercoupe is Roberts and Porter's answer.

General Supplies

PLEASE REMEMBER

This catalogue has been compiled at a time when material shortages and unpredictable price fluctuations are still with us. Prices quoted herein are those of September, 1947 — and in the event that prices are reduced in the months to come, our customers may rest assured that Roberts & Porter will be happy to pass on to them any savings that are effected.



TERMS AND CONDITIONS

Supplies and Chemicals — 2% in 10 days, 1% in 30 days, and net 60 days.

Equipment sold subject to office arrangements.

When factory shipments are made prices quoted are F. O. B. Factory.

When shipments are made from our stock, prices quoted are F. O. B. Chicago — New York — Detroit — Boston.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

GENERAL SUPPLIES

ABRASIVES — Graining

COMPARISON OF GRITS BY NUMBER

Silicon Carbide	Aluminum Oxide	Wausau Quartz	AGSCO Silica
600.....	600.....		
500.....	500.....		
400.....	400.....		
320.....	320.....	0000	
280.....	280.....		18
240.....	240.....	000	
220.....	220.....	00	16
180.....	180.....		10
150.....	150.....	1/2	
120.....	120.....		7
100.....	100.....	1	
90.....	90.....		4
80.....	80.....	1 1/2	
70.....	70.....	2	3
60.....	60.....	3	2
54.....	54.....		
46.....	46.....	4	
36.....	36.....		
30.....	30.....		
24.....	24.....	5	
20.....	20.....	7	
16.....	16.....		
12.....	12.....	8	
8.....	8.....	9	
6.....	6.....		
4.....	4.....	10	

Standard Sizes of Abrasive Grain

Screened Sizes—8, 10, 12, 14, 16, 20, 24, 30, 36, 46, 60, 70, 80, 90, 100, 150, 180, 220, 240.
 Unclassified Flours — F, 2F, 3F, 4F, XF.
 Classified Flours — 280, 320, 400, 500, 600.

Standard Sizes of Shipping Containers

Wooden Kegs — The nominal keg sizes are as follows: 400, 200, 100, 50 and 25 pounds, and refer to Average Net Weight of Contents. So-called "Large Kegs" hold slightly over 400 pounds in the coarsest sizes, down to approximately 230 pounds of Size No. 600.
 Cans — 50, 25, 10, 5 and 1 pounds net weight each.

AGSCO SILICA

A semi-angular material available in standard sizes 2-3-4-7-10-16 and 18. This product is for the most particular type of litho plate graining. It produces the most uniform grain for fine photo-lith and color plates, where the dots or lines are expected to stand right out. It is approved everywhere for half-tone reproductions.

Prices of above upon request

Over Fifty Years of Service to the Graphic Arts

ALUMINUM OXIDE

This product is made especially for litho plate graining. The shape of the kernel is controlled, eliminating flat or slivery shaped grains. With flats and slivers eliminated, a more uniform grain is produced. The flats and slivers cause scratches — with a blocky material the grained surface of zinc or aluminum is closed, giving more grain per square inch or additional wells to hold water.

"Special" Aluminum Silicon

For Regraining Deep Etch Plates

SILICON CARBIDE

WAUSAU FLINT QUARTZ

An abrasive that is particularly adapted for the purpose of providing litho poster plates with a satisfactory coarse grain.

GRAINING BALLS AND MARBLES

STEEL
GRAINING BALLS

3/8" diameter
 1/2" diameter
 3/4" diameter
 1" diameter
 1 1/8" diameter
 1 1/4" diameter
 1 1/2" diameter
 1 3/4" diameter
 2" diameter

GLASS
GRAINING MARBLES

1/2" diameter
 3/8" diameter
 3/4" diameter
 7/8" diameter
 1" diameter

HARD WOOD MAPLE BALLS

LIGNUM VITAE MARBLES

7/8" diameter

Steel graining balls are recommended for graining zinc. The glass or wooden marbles are used on aluminum plates.

GRAINING MACHINE LININGS

AGSCO TUFF STUFF Graining Machine Linings are made to fit any size graining tub — one piece — made to your specification. The adhesive cement is furnished with each lining.

Prices of above upon request

Over Fifty Years of Service to the Graphic Arts

APRONS — PLASTIC (Stitchless and Seamless)

Here is an apron that has been especially designed for Printers and Lithographers. For the first time in apron history, this all-plastic apron has been made by a new electronic process. . . . It is resistant to inks, oils, greases and most acids. . . . It does away with the old-type metal grommets and in its place are plastic eyelets that are fused right onto the apron permanently. . . . It is stitchless and seamless. It is pliable and soft, yet tough. . . . Light in weight, it cleans easily with a damp cloth. . . . 5 roomy pockets. . . . Will wear and wear. Try one and be convinced.

RESISTANT TO
Inks, Oils, Grease, Most Acids, Alkalies, Cold, Heat, Scuffing, Crumpling

SELECT YOUR COLOR AND WEIGHT

NO.	COLOR	SIZE	THICKNESS	LIST EACH
1629	Clear or Black	24" x 29"	.016	\$2.75
829	"	24" x 29"	.008	2.00
1642	"	36" x 42"	.016	4.15
842	"	36" x 42"	.008	3.75

DISCOUNTS
ALLOWED
ON QUANTITY
PURCHASES.

APRONS — RUBBER

Maroon Color — Double Coated — Light Weight

#20 — 27" x 36"1.35 ea.
#22 — 36" x 45"2.00 ea.

AQUATEX

Aquatex is a seamless tubing for dampening rollers on lithographic presses. This patented fabric was designed to help solve the problems of dampening control, and has the following outstanding characteristics.

1. Gives an absolutely even distribution of water.
2. Throws no fuzz or lint.
3. Has a uniform thickness; will not vary in strength under working conditions.
4. Stays in position; will not creep.
5. May be washed on or off the roller.

No.	Finished Dia. of Roller	Yds. per Roll	Less than Roll	Roll Lot	No.	Finished Dia. of Roller	Yds. per Roll	Less than Roll	Roll Lot
LL- 15	Under 3/4" for Multilith	20	1.10	.95	LL-200	2 3/4" - 3"	25	1.50	1.35
LL- 25	3/4" - 1"	20	1.10	.95	#0	1 1/4" - 1 1/2"	25	1.15	1.00
LL- 50	1 1/4" - 1 1/2"	20	1.10	.95	#1	1 3/4" - 2"	25	1.25	1.10
LL- 75	1 3/4" - 2"	25	1.25	1.10	#2	2 1/2" - 2 3/4"	25	1.50	1.35
LL-100	2 1/4" - 2"	25	1.35	1.20	#3	3" - 3 1/2"	20	1.60	1.45
LL-150	2 1/2"	25	1.45	1.30	#4	3 1/2" - 4"	20	1.70	1.55
					#5	4 1/2" - 5"	20	1.80	1.65

Over Fifty Years of Service to the Graphic Arts

BLANKETS — Offset Press

ROBPORT RUBBER OFFSET BLANKETS

The Robport rubber offset blanket is manufactured to our specifications — in both 3-ply and 4-ply. The knowledge gained during the recent war period concerning synthetic rubber has been utilized in the production of our new blanket, and we find the present formula superior to any used previously. Lack of resiliency is characteristic of synthetic rubber, and therefore, we have adopted a formula in which both synthetic and crude rubber are used in proportion. Thus, we retain resiliency obtained through the use of crude rubber and at the same time gain the oil resistance through the use of the synthetic. The finished product is a blanket that can be used on all classes of paper lithography, from straight line work to the finest half-tone reproductions, and it will faithfully reproduce everything that is on the press plate. The use of synthetic rubber in our formula reduces embossing to a minimum, and specially treated fabric totally eliminates the possibility that the blanket will stretch.

The Robport blanket is unique in the respect that it is the only one on the market that is originally built up to .068 thickness and then ground down to the standard .062" to .065". This grinding process guarantees that the finished blanket will be absolutely uniform in thickness and also eliminates any and all surface imperfections, such as pinholes, air bubbles, etc. that are so prevalent in blankets processed in other ways.

We also carry a special Robport Rubber Blanket that is made especially for lithographing on metal. In addition to possessing all of the above favorable blanket characteristics, it also has a somewhat harder surface, in order to resist the abrasions generally caused by working with metal.

ROBPORT RUBBER BLANKETS are stocked for all sizes and types of presses.

3-Ply.....18.00 per sq. yd.
4-Ply.....20.00 per sq. yd.

Press Model	Width	Around the Cylinder	Price
Webendorfer—Little Chief	20 1/2" x 16"		\$ 4.56
Webendorfer—Chief	22 3/8" x 22"		6.91
Harris LSB	23" x 23 3/4"		7.59
Harris LTG	23" x 26 3/4"		8.55
Harris CL	26" x 29"		10.48
Webendorfer—20 x 26	26 1/4" x 26 1/4"		9.58
Rutherford RHS	27" x 25"		9.38
Webendorfer—Big Chief	28 3/4" x 27"		10.78
Rutherford RHL	30" x 25"		10.42
Harris S4L	30" x 26"		10.84
Harris LSN	30" x 26 1/2"		11.05
Willard—22 x 34	36" x 26"		13.00
Harris S5L—EL—LTN	36" x 29 1/4"		14.75
Harris LSQ—LSR	41 1/2" x 37"		21.33
Hoe—30 x 42	43 1/2" x 42"		25.40
Miehle #44	44" x 32 1/2"		19.88
Harris S8L	44" x 35 1/4"		21.54
Harris LSC—LSD	46 1/2" x 45 1/2"		29.39
Harris LSS—LST	48 1/2" x 45"		30.31
Harris S7L	50 1/2" x 40 1/2"		28.41
Miehle #54	54 1/2" x 45 1/2"		34.47
Harris LB—GT—HT	54 1/2" x 51"		38.61
Harris LSW—LSX	54 1/2" x 54 1/2"		41.28
Hoe—41 x 54	55 1/2" x 54"		41.66
Miehle #57	57" x 47"		37.21
Miehle #60	59 1/2" x 48"		39.70
Harris LSJ—K—L—M	59 1/2" x 52 1/4"		43.18
Harris LF	65" x 54"		47.89
Harris LT	65" x 72"		65.05
Harris LTA	66 1/2" x 52 1/4"		48.30
Miehle #69	68" x 51"		48.17
Harris LSF—LSG—LSH	68 1/2" x 57"		54.23

Over Fifty Years of Service to the Graphic Arts

BLANKETS — Multilith and Davidson Presses

Press Model	Blanket Size	Price Each	Price ea. Doz. Lots
#40 Duplicator	10 $\frac{1}{16}$ " x 15 $\frac{1}{4}$ "	\$2.75	\$2.50
#1200 Multilith	10 $\frac{1}{16}$ " x 15 $\frac{1}{4}$ "	2.75	2.50
#1300 Multilith	11 $\frac{1}{2}$ " x 20 $\frac{1}{4}$ "	4.00	
#2000 Multilith	20 $\frac{9}{16}$ " x 15 $\frac{1}{4}$ "	4.80	
#2066 Multilith (large drum)	20 $\frac{9}{16}$ " x 20"	6.30	
#451 Davidson	10 $\frac{1}{16}$ " x 15 $\frac{1}{4}$ "	2.75	2.50

CARE OF OFFSET PRESS BLANKETS

In order to get the most out of your blankets, the following rules should be observed.

1. A blanket will last longer and perform better if given a daily scrubbing with blanket wash and pumice.
2. A glazed blanket can often be renewed by scrubbing it with naptha and pumice.
3. Absorption of the greasy compounds and varnishes from the printing inks will generally cause a blanket to swell or emboss. This condition can be relieved to some extent by carefully washing and then storing away the blanket for a period of time. The blanket should be rolled up (rubber side in) and stored in a cool, dry place.
4. Rubber blankets should be protected from their natural enemies — heat, light and dampness.
5. Kerosene and turpentine are harmful to rubber, and their use should be avoided.
6. Naptha and gasoline will evaporate out of a rubber blanket, but kerosene will not and, therefore, it should never be used as a blanket wash.

The following blanket wash comes highly recommended:

BLANKET WASH

1 gal. Acetone
1 $\frac{3}{4}$ ozs. Hydroquinone

Use as follows: Add 12 ozs. of the above solution to one gallon of gasoline. This blanket wash dries quickly and helps to prevent blanket sponginess.

Over Fifty Years of Service to the Graphic Arts

BRUSHES — ARTIST

Winsor & Newton — Series 7 "Albata" Red Sable

No.	Each	No.	Each
00-0-1 Round	\$.60	8 "	2.90
2 "	.75	9 "	4.50
3 "	.85	10 "	5.60
4 "	1.00	11 "	7.25
5 "	1.35	12 "	9.00
6 "	1.75	13 "	11.50
7 "	2.35	14 "	14.50

Winsor & Newton — Series 18A Dyed Sable Hair Mixture

No.	Each	No.	Each
0-1 Round	\$.35	7 "	.90
2 "	.40	8 "	1.25
3 "	.45	9 "	1.60
4 "	.50	10 "	2.10
5 "	.55	11 "	2.75
6 "	.60	12 "	3.25

BRUSHES — CHINESE ETCHING (Stocked When Available)
BRUSHES — RUBBERSET

No. 912 — Lithographers Etching Brushes — Pure Bristle



3" 2.60 each
4" 4.70 each

These brushes are used for etching offset press plates after development.

No. 9730 — Lithographers Etching Brushes — Soft Hair



6" 8.45 each
8" 9.75 each

These brushes are used for the same purpose as the No. 912.

No. 9700 — Lithographers Camel Hair Brushes



$\frac{1}{2}$ " 1.10 each
1 " 1.25 each
4 " 5.25 each

The $\frac{1}{2}$ " and 1" sizes make excellent "staging-out" brushes for deep-etch work. The 4" brush is generally used in the camera room for dusting off unexposed film, etc.

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

BRUSHES — Scrub

Pure white tampico bristles, made to resist hard wear.

	Each	Per Doz.
2½" x 6½"	\$.50	\$5.00
3" x 8¼" .....	.65	6.50

BULBS — Amber and Ruby

25 Watt Natural Amber Bulb	\$.45 each
25 Watt Natural Ruby Bulb .....	.50 each
60 Watt Natural Amber Bulb .....	.55 each
60 Watt Natural Ruby Bulb .....	.65 each

These bulbs are made of clear glass and are intended for use in photographic and offset plate departments.

CANS — Safety (See Safety Cans)

Carbons — National White Flame Photographic

When ordering carbons state clearly the kind and type required, giving both the diameter and length and specifying whether plain or copper-coated.

Packed in convenient unit packages containing 50 carbons. Easy to stock. Protected against breakage. The carbons are polished and clean to handle. Unit packages are clearly labeled showing the type, size and quantity of carbons in each package.

		Plain	Copper Coated
⅜ x 12 (10mm x 12)	per 50	\$ 5.85	\$ 6.05
Case of 250	per 250	25.85	27.05
½ x 12	per 50	7.10	7.40
Case of 250	per 250	31.45	32.55
⅝ x 12	per 50	10.40	11.25
Case of 250	per 250	46.00	49.80
¾ x 12	per 50	14.30	15.75
Case of 250	per 250	63.45	69.85

CARBON SAVERS

Enable operator to use practically entire length of carbon.
½" an ⅝"\$1.45 each

CELLULOSE TAPES — (See Tapes)

CELLULOSE WIPING PAPERS — (See Paper)

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

CHAMOIS SKINS

Extra Quality — Soft Skins

No.	Size	Price Each
515	14 x 18	\$1.75
517	16 x 21	2.00
518	17 x 23	2.25

CHINESE ETCHING BRUSHES (Stocked When Available)

CHEESECLOTH

#10 — Coarse Mesh (80 yard bolt)	\$.08 per yd.
#40 — Fine Mesh (70 yard bolt) .....	.11 per yd.
#50 — Fine Mesh (70 yard bolt) .....	.12½ per yd.

CORRECTION SLIPS

Etcho Snakeslips — Round or Flat	\$.75 per dozen
Weldon Roberts Retouch Transfer Sticks	1.80 per dozen

COTTON

Utility Grade

100 x 1 lb. Rolls	\$.53 per lb.
50 x 1 lb. Rolls .....	.56 per lb.
25 x 1 lb. Rolls .....	.58 per lb.
1 lb. Roll .....	.63 per lb.

Photo Grade

100 x 1 lb. Rolls	\$.61 per lb.
50 x 1 lb. Rolls .....	.64 per lb.
25 x 1 lb. Rolls .....	.66 per lb.
1 lb. Roll .....	.71 per lb.

COTTON TUBING — (See Seamless Tubing)

CROCKS — Stoneware, Acid Proof

Size	Price
10 gal.	\$5.00
5 gal.	2.50
3 gal.	1.85
2 gal.	1.25
1 gal. ....	.85

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

DAMPABASE

Dampabase is a seamless under-cover tubing that is used in conjunction with Aquatex. This patented fabric possesses the following advantages:

1. Built on the same practical lines as Aquatex.
2. Applied to roller in same manner.
3. Has no seam—eliminates possibility of an uneven surface.
4. Is a semi-absorbent material and acts as a reservoir for water feed.

Size No.	Yds. per Roll	Less than Roll	Roll Price
00	20	\$1.10	\$.95
0	25	1.10	.95
50	25	1.10	.95
1	25	1.15	1.00
2	25	1.25	1.10
3	20	1.35	1.20

DAMPENER ROLLER SCRAPER

Curved blade for cleaning rollers\$2.75 each

DAMPENER AND DUCTOR ROLLER SIZES

AS SPECIFIED BY THE MANUFACTURER

Note: F. D. means finished diameter — L. means length
O. S. means Old Style — N. S. means New Style

Press No.	Mfr. — Sheet Size	Dampener F.D. & L.	Ductor F.D. & L.
S10	Harris — 14½ x 17½	29½" x 21"	Same
LSB	Harris — 17 x 22	2½" x 27"	Same
LTG	Harris — 17 x 22	1½" x 24½"	2" x 26"
SIL	Harris — 17 x 22	29½" x 27"	Same
CL	Harris — 19 x 25	3½" x 27"	Same
LSN	Harris — 21 x 28	2½" x 31"	Same
S4L	Harris — 22 x 30	3½" x 31"	Same
LTN	Harris — 22 x 34	2½" x 37"	2" x 39"
EL	Harris — 22 x 34	3½" x 37"	Same
S5L	Harris — 22 x 34	3½" x 37"	Same
AT	Harris — 26 x 34	29½" x 36"	Same
S6L	Harris — 28 x 34	3½" x 37"	Same
LSQ	Harris — 25 x 38	3½" x 42½"	3½" x 43¾"
LSR	Harris — 25 x 38	3½" x 42½"	3½" x 43¾"
S8L	Harris — 28 x 42	3½" x 46"	Same
LSC	Harris — 32 x 44	3½" x 47¾"	3½" x 48½"
LSD	Harris — 32 x 44	3½" x 47¾"	3½" x 48½"
S7L	Harris — 36 x 48	3½" x 51½"	3½" x 52¼"
FT	Harris — 36 x 48	3½" x 51½"	3½" x 52¼"
BD	Harris — 34 x 46	3" x 50"	Same
LSS	Harris — 35 x 45	3½" x 49½"	3½" x 50¾"
LST	Harris — 35 x 45	3½" x 49½"	3½" x 50¾"
BB	Harris — 38 x 52	3" x 55½"	Same
PB	Harris — 38 x 52	3" x 55½"	Same
DW	Harris — 41 x 52	3" x 56"	Same
DU	Harris — 41 x 54	3" x 56"	Same
DX	Harris — 41 x 54	3" x 56"	Same
LB	Harris — 41 x 54	3½" x 55¾"	3½" x 56½"
GT	Harris — 41 x 54	3½" x 55¾"	3½" x 56½"
JT	Harris — 41 x 54	3½" x 55¾"	3½" x 56½"

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

Press No.	Mfr. — Sheet Size	Dampener F.D. & L.	Ductor F.D. & L.
LSJ	Harris — 42 x 58 (O.S.) Serials #101 to 154	3½" x 60½"	3½" x 62"
LSK	Harris — 42 x 58 (O.S.) Serials #101 to 168	3½" x 60½"	3½" x 62"
LSM	Harris — 42 x 58 (O.S.) Serials #101 to 109	3½" x 60½"	3½" x 62"
LSJ	Harris — 42 x 58 (N.S.) Serials #155 and after	3½" x 60½"	3½" x 63½"
LSK	Harris — 42 x 58 (N.S.) Serials #169 and after	3½" x 60½"	3½" x 63½"
LSM	Harris — 42 x 58 (N.S.) Serials #110 and after	3½" x 60½"	3½" x 63½"
LE	Harris — 44 x 58	3½" x 61"	Same
LF	Harris — 44 x 64	3½" x 67"	Same
LT	Harris — 44 x 64	3½" x 67½"	Same
LSF	Harris — 46 x 68 (O.S.) Serials #101 to 114	3½" x 69½"	3½" x 71¼"
LSG	Harris — 46 x 68 (O.S.) Serials #101 to 126	3½" x 69½"	3½" x 71¼"
LSH	Harris — 46 x 68 (O.S.) Serials #101 to 105	3½" x 69½"	3½" x 71¼"
LSF	Harris — 46 x 68 (N.S.) Serials #115 and after	3½" x 69½"	3½" x 73½"
LSG	Harris — 46 x 68 (N.S.) Serials #127 and after	3½" x 69½"	3½" x 73½"
LSH	Harris — 46 x 68 (N.S.) Serials #106 and after	3½" x 69½"	3½" x 73½"
#4	Hoe — 36 x 48	2½" x 51"	Same
#5	Hoe — 39 x 54	2½" x 57"	Same
41/54	Hoe — 41 x 54	3½" x 57"	Same
#6	Hoe — 56 x 66	2½" x 68"	Same
#2	Hoe — Tin Rotary	2½" x 36"	Same
#TIN	Hoe — Tin Offset	3½" x 36"	Same
#34	Miehle	2½" x 37"	Same
#42	Miehle	3" x 46"	2½" x 46"
#44	Miehle	3½" x 44½"	2½" x 44½"
#54	Miehle	3" x 56"	2½" x 56"
#57	Miehle	3½" x 58½"	Same
57-60	Miehle	3½" x 61"	Same
#60	Miehle	3½" x 61"	Same
#61	Miehle	3½" x 61"	3¾" x 61"
#65	Miehle	3" x 67"	2½" x 67"
#69	Miehle	3½" x 70"	Same
#76	Miehle	3½" x 77½"	3¾" x 77½"

Note: All Miehle Press sizes shown above are for all presses built to date. Data was submitted by their Engineering Dept. No information has been received as yet concerning their new #61 postwar press.

Press No.	Mfr. — Sheet Size	Dampener F.D. & L.	Ductor F.D. & L.
#24	Rutherford — 24"	2½" x 27"	Same
#32	Rutherford — 32"	2½" x 34"	Same
#38	Rutherford — 38"	2½" x 40"	Same
#P	Webendorfer — 12 x 18"	2½" x 20"	1¾" x 20"
MP	Webendorfer — 14 x 20" (Little Chief)	2½" x 23"	1½" x 23"
MAC	Webendorfer — 17½ x 22½" (Chief)	2½" x 24"	Same
#S	Webendorfer — 20 x 26"	2½" x 28"	Same
#SA	Webendorfer — 22 x 29" (Big Chief)	2½" x 34"	Same
	Willard — 22 x 34"	2½" x 40"	Same

Over Fifty Years of Service to the Graphic Arts

DAMPENER ROLLER COVERING SERVICE

For those of our customers who do not operate enough presses to warrant the purchase of one of our roller-covering machines, we operate a dampener roller covering service in all of our plants. For maximum press efficiency you should use only machine-made dampening rollers . . . in order to be assured of a perfectly cylindrical roller throughout . . . even in diameter from end to end . . . with a machine-sewn silk seam that will be flush with the surface of the molleton. We can make such rollers for you on our ROBPORT SPEEDJACKET MACHINES. Phone or write the Roberts & Porter office nearest your plant, and your rollers will be picked up and returned to you promptly.

Finished Dia. of Roller	Length	Molleton Only	Top Flannel and Molleton	All New
2 1/4" to 2 3/8"	12"	\$1.71	\$3.15	\$4.48
	16"	1.86	3.44	4.87
	20"	2.01	3.73	5.26
	24"	2.15	4.01	5.64
	26"	2.22	4.15	5.83
	28"	2.29	4.28	6.01
	32"	2.43	4.55	6.38
	36"	2.57	4.82	6.75
	38"	2.66	4.97	6.93
	42"	2.79	5.22	7.26
	46"	2.92	5.47	7.59
	50"	3.05	5.72	7.92
	54"	3.18	5.96	8.24
	56"	3.24	6.08	8.39
	58"	3.30	6.19	8.55
	62"	3.42	6.42	8.86
	66"	3.54	6.65	9.17
	68"	3.60	6.77	9.32
	70"	3.66	6.88	9.48
	74"	3.78	7.11	9.79
3" to 3 5/8"	38"	3.03	5.67	7.87
	42"	3.19	5.98	8.29
	46"	3.35	6.29	8.71
	50"	3.50	6.59	9.12
	54"	3.65	6.89	9.52
	56"	3.72	7.04	9.72
	58"	3.80	7.19	9.92
	62"	3.95	7.49	10.32
	66"	4.10	7.79	10.72
	68"	4.17	7.94	10.92
3 1/2" to 3 3/4"	70"	4.25	8.09	11.12
	74"	4.40	8.38	11.51
	38"	3.25	6.15	8.54
	42"	3.43	6.51	9.03
	46"	3.61	6.87	9.52
	50"	3.79	7.23	10.01
	54"	3.96	7.58	10.48
	58"	4.13	7.93	10.95
	62"	4.30	8.28	11.42
	66"	4.47	8.62	11.88
	70"	4.64	8.96	12.34
	74"	4.81	9.30	12.80

Above sleeves supplied in #310 — medium weight molleton, unless otherwise specified.

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DAVIDSON PRESS COVERS

Flannel and Molleton covers are silk-sewn. Simply slip on the roller and tie laced ends.

Molleton covers are supplied in sets of two — 1 ductor (small sleeve) and 1 form (large sleeve). These covers may also be purchased separately.

Sewn Flannel Covers.....	1.00 each
Sewn Linen Covers.....	.45 each
Sewn Molleton Covers.....	Price per Set \$2.15 Price in Doz. Sets \$1.90

FELT

Our Felt is woven from 100% Virgin Wool of uniform thickness throughout.

No.	Thickness	Width	Price per Yard
160.....	1/8"	54"	\$9.50
160.....	1/8"	66"	11.25
120.....	1/8"	54"	13.75
120.....	1/8"	66"	17.15
180.....	1/8"	54"	17.00

FILM — ANSCO

One of the foremost manufacturers of photographic products in the world today is Ansco. We carry their complete line of materials available for graphic arts use.

Ansco Reprolith films, for line and halftone reproductions, are noted for their extreme contrast and density. Line work sparkles with crystal clear whites and sharply defined blacks of exceptional opacity. Faithful, high quality half-tones are assured through fine grain, high resolving power and clean, crisp dot formations.

Reproolith films lie flat and dry fast. Their physical hardness allows for rough handling and assists after treatments, such as reduction and dot etching.

Individual characteristics of each film follow:

REPROLITH ORTHOCHROMATIC FILM, ANTI HALO is the ideal medium for halftone making because of its high contrast and speed due to high orthochromatic sensitivity. It is equally well-suited for the handling of line copy, monochrome or colored. The use of filters permits improved rendition of copies which would otherwise require handwork on the negatives. This film must be handled in red safelight.

REPROLITH ORTHOCHROMATIC THIN BASE FILM, ANTI-HALO has the same emulsion as the REPROLITH ORTHOCHROMATIC. It is coated on thin base (about .004) and its use is particularly suggested for overlays, strip-ins, and for cases where the image is to be reversed. This film must be handled in red safelight.

REPROLITH FILM, ANTI-HALO is a color-blind material for line and halftone negatives from black-and-white copy as well as for contact prints for offset printing and kindred reproduction methods. It may be handled in yellow safelight.

REPROLITH THIN BASE FILM, ANTI-HALO has the same emulsion as REPROLITH FILM. It has been especially developed for deep etch positives and dot etching. This thin film (about .004) permits "printing through" without loss of detail. Like REPROLITH, it may be handled in yellow safelight.

REPROLITH STRIPPING FILM, ORTHOCHROMATIC has the same photographic characteristics as REPROLITH ORTHOCHROMATIC. This film strips easily with minimum soaking time at 80° F. The membrane leaves the base freely and without tension, thus reducing the possibility of injury or distortion. Its excellent size-holding properties permit a high degree of accuracy in making overlays or inserts and in butting operations.

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

ANSCO REPROLITH AND REPROLITH ORTHO FILM PRICES

Cut Film						
Size	2 Dozen	Tax	1/2 Gross	Tax	Gross	Tax
5 x 7	\$ 2.02	\$.23	\$ 6.06	\$.69	\$11.76	\$1.37
8 x 10	4.45	.52	13.35	1.56	24.56	2.99
8 1/2 x 11	5.29	.62	15.87	1.85	29.44	3.59
10 x 12	6.80	.79	20.40	2.37	37.64	4.59
11 x 14	8.74	1.01	26.22	3.03	48.44	5.90
12 x 17	11.63	1.35	34.89	4.05	64.44	7.85
12 x 18	12.35	1.43	37.05	4.29	68.56	8.36
14 x 17	13.52	1.57	37.44	4.56	74.88	9.12
16 x 20	18.23	2.12	50.48	6.15	100.96	12.30
18 x 22	22.60	2.62	62.60	7.63	125.20	15.26
20 x 24	26.04	3.17	75.80	9.24	151.60	18.48
22 x 28	33.44	4.08	99.20	12.09	198.40	24.18

Roll Film

Size	Per Roll	Tax
20" x 100 ft.	\$45.00	\$5.48
30" x 50 ft.		
30" x 100 ft.		
36" x 100 ft.		
42" x 50 ft.	46.80	5.70
42" x 100 ft.	84.48	10.30

Also supplied in rolls for use in Chemco cameras. All sizes. Wound emulsion side out on 3" flush cores. Prices upon request.

ANSCO REPROLITH ORTHO STRIPPING FILM PRICES

Cut Film						
Size	2 Dozen	Tax	1/2 Gross	Tax	Gross	Tax
5 x 7	\$ 2.69	\$.31	\$ 8.06	\$.94	\$14.88	\$1.81
8 x 10	5.54	.64	16.63	1.93	30.72	3.74
8 1/2 x 11	6.64	.77	19.91	2.31	36.80	4.49
10 x 12	8.48	.99	24.24	2.96	47.04	5.73
11 x 14	10.92	1.27	31.20	3.80	60.56	7.38
12 x 18	15.46	1.79	44.16	5.38	85.68	10.44
14 x 17	16.88	1.96	46.80	5.70	93.60	11.41
16 x 20	22.76	2.64	63.08	7.69	126.16	15.38
18 x 22	26.88	3.28	78.24	9.54	156.48	19.07
20 x 24	32.56	3.97	94.76	11.55	189.52	23.10

Also supplied in rolls for use in Chemco cameras. All sizes. Wound emulsion side out on 3" flush cores. Prices upon request.

Roll Film

Size	Per Roll	Tax
100' x 6"	\$17.16	\$2.09
100' x 9 1/2"	27.48	3.35
100' x 13"	36.40	4.44
100' x 19"	52.88	6.45

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.



DU PONT PHOTOLITH FILM

Orthochromatic—Non-Halation
Safety Base .005" Thick

TOP CAMERAMEN APPROVE THESE SALIENT FEATURES:

Hard dots :: Contrast :: Speed :: Wide latitude :: Quick drying
Flat lying :: Easy scribing :: Easy etching :: Convenient packaging

Du Pont Photolith is a fast, orthochromatic film for making both halftone and line negatives or positives as used in lithography, offset printing and allied methods of reproduction. It has high inherent contrast. The non-halation backing disappears completely in processing. Halftone dots etch well. Lines may readily be opened up by any of the usual etching methods. Photolith is sensitive to blue, blue-green, green and yellow . . . usual correction filters may be used for colored or stained copy.

Photolith Film holds its size well and lies flat. The film base is water-resistant . . . does not waterlog and therefore dries quickly. It can be secured in the camera by any conventional means. For contact work, a vacuum printing frame is recommended.

Photolith Film should be handled under red safelights of such intensity and at sufficient distance to avoid producing fog.

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ROBERTS & PORTER, INC.

The following filter factors will serve as a guide for exposures with filters but may be altered somewhat by variations in individual lighting conditions:

FILTER FACTORS

White Flame Carbon Arc Filter Factors

No.	Name	Color	Multiplying Factor
6	K1	Light Yellow	2.0
8	K2	Medium Yellow	2.5
9	K3	Dark Yellow	3.0
12	—	Minus Blue	4.0
15	G	Orange Yellow	7.0
47	C5	Blue	6.0
58	B	Green	5.0

DU PONT PHOTOLITH FILM PRICES — INCLUDING TAXES

Cut Film

Size	1 Pkg. 2 Dozen	3 Pkgs. 1/2 Gross	6 Pkgs. 1 Gross
5 x 7	\$ 2.25	\$ 6.29	\$ 12.57
8 x 10	4.97	13.78	27.55
8½ x 11	5.91	16.52	33.03
10 x 12	7.59	21.12	42.23
11 x 14	9.75	27.17	54.33
12 x 17	12.98	36.15	72.29
12 x 18	13.78	38.46	76.92
14 x 17	15.09	42.00	84.00
16 x 20	20.35	56.63	113.26
18 x 22	25.22	70.25	140.50
20 x 24	30.51	85.04	170.08
22 x 28	39.20	112.56	225.12

Roll Film

Size	Per Roll
20" x 100'	\$ 50.48
30" x 100'	75.39
40" x 100'	100.30
13" x 150'	49.22
18" x 150'	68.15
19" x 150'	71.93
20" x 150'	75.72

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

ANSCO GRAPHIC CHEMICALS

ANSCO 79 — PARALITH DEVELOPER (Paraformaldehyde) is recommended for best results, for line and halftone negatives and contact positives for dot etching. Developing times are from 1½ to 3 minutes in fresh Paraformaldehyde Developer at 68° F. (20° C.). This developer has a limited keeping quality and therefore, should be changed frequently to assure uniform results.

per gal. can	\$.70
3 cases (36 cans)	21.42
per 5 gal. can	\$ 2.75
1 case (8 cans)	18.70

ANSCO 81 — REPROLITH DEVELOPER is a contrast developer of good keeping quality, and is primarily recommended for commercial and photofinishing establishments. Normal developing time is 2 minutes at 68° F. (20° C.).

per gal. can	\$ 1.00
3 cases (36 cans)	30.60

ANSCO STAYFLAT SOLUTION is a special adhesive preparation in liquid form which provides a practical and efficient method of supporting film evenly and securely on glass for camera exposures. Economical, clean and dependable, it assures perfect adhesion of the film over the entire area. It is easily applied by spraying, or by pouring and coating the solution on the polished glass. A plate thus prepared will be good for repeated use over a period of months.

Anso Stayflat Solution, Regular, is a clear solution recommended for cameras with detachable focusing backs.

Anso Stayflat Solution, Matte, provides both an adhesive coating for film support and a ground-glass effect for focusing purposes. Recommended for all darkroom cameras having a stationary focusing back.

1 pint bottle	\$ 1.80
1 quart bottle	3.00
1 gal. bottle	7.20
5 gal. bottle	38.80

ANSCO STRIPPING FILM CEMENT is an inexpensive, quick-drying chemical preparation which eliminates the bother and saves the time ordinarily spent in mixing home-made film cements. Uniform and reliable in use and action, Anso Stripping Film Cement creates a firm bond between the strip-film membrane and the permanent support. The film is held perfectly flat and in exact position, yet may be restripped quickly and cleanly without damage.

4 ounce bottle	\$.35
16 ounce bottle	.60
32 ounce bottle	1.00

A FEW SHARP SUGGESTIONS

Avoid camera vibrations of any kind during exposure. A double dot or moire in halftones is often caused by a slamming darkroom door or slight movement of the camera.

Clean both front and rear elements of lenses regularly. It will make a surprising difference in negative quality. Pinholes are almost universally caused by dust or dirt. Copy boards, lenses, screens, interior bellows surfaces and darkroom floors and tables are just a few of the places where cleanliness and care pay off.

Check alignment of halftone screen with vacuum back or stayflat film holder occasionally. It prevents variation in dot size and shape from one side of the negative to the other. Keep screen wedge handy.

Arc light reflectors get dirty and dull from constant use. This tends to lengthen the exposure time considerably. A good aluminum paint applied once or twice a year will restore their efficiency.

Do you have a direct power supply line for camera arc lamps? If not, presses, plate-making equipment, elevators and other units may cause variations in camera results.

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GENERAL HALFTONE NEGATIVE FAULTS

It is sometimes difficult to specifically determine the exact cause of halftone defects without resorting to a "trial and error" method. Often, more than one factor is involved, such as incorrect exposure, combined with improper lens openings and screen distances. The following list assumes correct development; as established by manufacturers recommendations, and is offered for guide purposes only.

NEGATIVE FAULTS

Excessive contrast

Highlight dots too large

Highlight dots too small

Shadow dots too large

Shadow dots too small

Over-all negative thin, weak or flat.

POSSIBLE CAUSES

Highlight exposure excessive; highlight stop too large; insufficient middletone and detail exposure; too little flash exposure; excessive screen distance.

Too much exposure, particularly in highlights; highlight stop too large; excessive screen distance.

Insufficient highlight exposure; highlight stop too small; insufficient middletone and detail exposure; insufficient screen distance.

Excessive detail exposure; too much flash exposure; flash stop too large; insufficient screen distance.

Insufficient detail exposure; detail stop too small; insufficient flash exposure; flash stop too small; excessive screen distance.

Lens stop too small; insufficient exposure; inadequate flashing; insufficient screen distance.

CONVERSION TABLES

The following conversion tables are presented for those who need a quick and simple means of converting weight and volumes.

Weight

1 pound	= 16 ounces	1 kilogram	= 2.205 pounds
	= 7000 grains		
	= 453.6 grams	1 gram	= 15.43 grains
	= 0.4536 kilograms		= 0.035 ounces
1 ounce	= 437.5 grains		
	= 28.35 grams		
1 grain	= 0.0648 gram		

Liquid

1 gallon	= 4 quarts	1 dram	= 0.125 ounce
	= 128 ounces		= 3.695 cc.
	= 1024 drams		
	= 3785 cc.	1 liter	= 1000 cc. (milliliters)
	= 3.785 liters		= 33.81 ounces
1 quart	= 32 ounces		= 1.057 quarts
	= 946.3 cc.		= 0.2642 gallon
	= 0.9463 liter	1 cc.	= 0.001 liter
1 ounce	= 29.57 cc.		= 0.03381 ounce

Fractional

1 pound	= 16 ounces	= 7000 grains	= 453.6 grams	= 0.4536 kilograms
1/2 pound	= 8 ounces	= 3500 grains	= 226.8 grams	
1/4 pound	= 4 ounces	= 1750 grains	= 113.4 grams	
1/16 pound	= 1 ounce	= 437.5 grains	= 28.35 grams	
1 gallon	= 4 quarts	= 8 pints	= 128 ounces	= 3785 cc. = 3.785 liters
1/4 gallon	= 1 quart	= 2 pints	= 32 ounces	= 946.3 cc. = 0.9463 liter
1/8 gallon	= 1/2 quart	= 1 pint	= 16 ounces	= 473.2 cc. = 0.4732 liter
1/128 gallon	= 1/32 quart	= 1/16 pint	= 1 ounce	= 29.57 cc. = 0.0296 liter

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FILTER FACTORS

The following filter factors apply only to the orthochromatic Reprolith type emulsions when arc lamps are used.

Wratten K1.....	1.5
Wratten K2.....	3.0
Wratten K3.....	4.0
Wratten B, No. 58.....	5.0
Wratten C5, No. 47.....	10.0
Wratten D, No. 34.....	6.0

DEVELOPING FORMULAS

ANSKO 79

PARAFORMALDEHYDE DEVELOPER

This is a standard formula recommended for development of Reprolith and Reprolith Ortho Films. Ansco 79 may be obtained in packaged form by ordering "PARALITH DEVELOPER."

	Metric	Avoirdupois
Water (Not over 90° F. or 32° C.).....	2000 cc.	64 ounces
Ansco Sodium Sulfite, anhydrous.....	120 grams	4 ounces
Paraformaldehyde.....	30 grams	1 ounce
Potassium Metabisulfite.....	10.5 grams	1/4 oz. 45 gr.
Boric Acid Crystals.....	30 grams	1 ounce
Ansco Hydroquinone.....	90 grams	3 ounces
Ansco Potassium Bromide.....	6 grams	88 grains
Water to make.....	4 liters	1 gallon

Dissolve chemicals in the order given and use solution full strength. Normal developing time 2 to 3 minutes at 68° to 70° F. (20° to 21° C.). For Reprolith Orthochromatic, develop 1 1/2 to 3 minutes at same temperature.

ANSKO 81

REPROLITH DEVELOPER

This formula may be obtained in packaged form by specifying Reprolith Developer. Formula 81 provides a single-solution developer of excellent keeping quality for the development of Reprolith Film.

	Metric	Avoirdupois
Hot Water (125° F. or 52° C.).....	750 cc.	24 ounces
Ansco Hydroquinone.....	35 grams	1 oz. 75 gr.
Ansco Sodium Sulfite, anhydrous.....	55 grams	1 3/4 oz. 40 gr.
Ansco Sodium Carbonate, monohydrated.....	80 grams	2 1/2 oz. 80 gr.
Citric Acid.....	5.5 grams	80 grains
Ansco Potassium Bromide.....	10 grams	1/4 oz. 35 gr.
Water to make.....	1 liter	32 ounces

Do not dilute for use. Normal developing time not longer than 3 minutes at 68° F. (20° C.).

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ANSCO 130 UNIVERSAL PAPER DEVELOPER

This formula is a universal developer for all projection and contact papers. It gives rich black tones with excellent brilliance and detail. Ansco 130 provides unusual latitude in development and is clean-working even with long developing times.

Stock Solution

	Metric	Avoirdupois		
Hot Water (125° F. or 52° C.)	750 cc.	24 ounces	3 quarts	
Ansco Metol	2.2 grams	32 grains	1/4 oz. 20 gr.	
Ansco Sodium Sulfite, anhydrous	50 grams	1 1/2 oz. 75 gr.	6 3/4 ounces	
Ansco Hydroquinone	11 grams	1/4 oz. 50 gr.	1 1/4 oz. 90 gr.	
Ansco Sodium Carbonate, monohydrated	78 grams	2 1/2 oz. 50 gr.	10 1/2 ounces	
Ansco Potassium Bromide	5.5 grams	80 grains	3/4 ounce	
Ansco Glycin	11 grams	1/4 oz. 50 gr.	1 1/4 oz. 90 gr.	
Water to make	1 liter	32 ounces	1 gallon	

The prepared stock solution is clear but slightly colored. The coloration in this case does not indicate the developer has deteriorated or is unfit for use.

For use, dilute 1 part stock solution with 1 part water.

Normal developing time at 68° F. (20° C.) for Brovira, 2 to 6 minutes, for Convira, Cykon, Cykora and Indiatone, 1 1/2 to 3 minutes.

Greater contrast can be obtained by using the developer stock solution full strength. Softer results can be obtained by diluting 1 part stock solution with 2 parts water.

FIXING FORMULAS ANSCO 201 ACID HARDENING FIXER

This hardening fixing bath for use with either film or paper may be stored indefinitely and used repeatedly until exhausted. If the fixing bath froths, turns cloudy, or takes longer than 10 minutes to fix out completely, it must be replaced by a fresh solution.

Solution 1		Avoirdupois		
	Metric			
Hot Water (125° F. or 52° C.)	500 cc.	16 ounces	1/2 gallon	
Hypo	240 grams	8 ounces	2 pounds	

Solution 2		Avoirdupois		
	Metric			
Hot Water (125° F. or 52° C.)	150 cc.	5 ounces	20 ounces	
Ansco Sodium Sulfite, anhydrous	15 grams	1/2 ounce	2 ounces	
Ansco Acetic Acid (28%)	45 cc.	1 1/2 ounces	6 ounces	
Ansco Potassium Alum	15 grams	1/2 ounce	2 ounces	
Add Solution 2 to 1 and add water to make	1 liter	32 ounces	1 gallon	

Dissolve chemicals thoroughly in order given and stir rapidly while adding Solution 2 to Solution 1. Glacial acetic acid may be diluted to 28% concentration by adding 3 parts of acid to 8 parts of water. Do not dilute for use. Normal fixing time 5 to 10 minutes at 68° F. (20° C.).

ANSCO 202 CHROME ALUM FIXER

This hardening fixing bath for use with films in hot weather should be used fresh, as it does not retain its hardening action.

Solution 1		Avoirdupois		
	Metric			
Hot Water (125° F. or 52° C.)	2.5 liters	80 ounces		
Hypo	960 grams	2 pounds		
Ansco Sodium Sulfite, anhydrous	60 grams	2 ounces		
Water to make	3 liters	3 quarts		

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Solution 2			
Water	1 liter	32 ounces	
Ansco Potassium Chrome Alum	60 grams	2 ounces	
Sulphuric Acid C.P.	8 cc.	1/4 ounce	

Slowly pour Solution 2 into Solution 1 while rapidly stirring the latter. Do not dilute for use. Do not dissolve the chrome alum at a temperature higher than 150° F. (66° C.). Always rinse films thoroughly before fixing. Normal fixing time 5 to 10 minutes at 68° F. (20° C.).

REDUCING AND INTENSIFYING FORMULAS

ANSCO 310 FARMER'S REDUCER

This is a cutting reducer for lessening the density of heavy negatives and at the same time increasing their contrast. It is especially valuable for reproduction films to clear the whites.

Solution 1		Avoirdupois		
	Metric			
Hypo	240 grams	8 ounces		
Water to make	1 liter	32 ounces		

Solution 2		Avoirdupois		
Ansco Dipotassium Mono Sodium Ferricyanide or Potassium Ferricyanide	19 grams	1/2 oz. 70 gr.		
Water to make	250 cc.	8 ounces		

For use mix one part Solution 2 and four parts Solution 1 in 32 parts water. Solutions 1 and 2 should be stored separately and mixed immediately before use.

ANSCO 311 FLATTENING REDUCER

This reducer is useful for lessening the density and contrast of heavy negatives.

Solution 1		Avoirdupois		
	Metric			
Ansco Dipotassium Mono Sodium Ferricyanide or Potassium Ferricyanide	35 grams	1 oz. 75 gr.		
Ansco Potassium Bromide	10 grams	1/4 oz. 35 gr.		
Water to make	1 liter	32 ounces		

Bleach in Solution 1 and after thorough washing, redevelop to desired density and contrast in Ansco 47 or other negative developer except fine-grain developers. Then fix and wash in usual manner. Conduct operation in subdued light.

ANSCO 330 MERCURY INTENSIFIER

This intensifier is recommended for increasing the printing density of thin, flat negatives.

		Metric	Avoirdupois		
Ansco Potassium Bromide	10 grams		1/4 oz. 35 gr.		
*Mercuric Chloride	10 grams		1/4 oz. 35 gr.		
Water to make	1 liter		32 ounces		

Do not dilute for use. Negatives to be intensified must be very thoroughly washed first or yellow stains may result on the intensified negative. Immerse negatives in above solution until thoroughly bleached to the base of the film and then wash in water containing a few drops of hydrochloric acid. Redevelop bleached negatives in 5% sodium sulfite or any standard developer. Surface scum which forms during storage of the bleaching solution does not affect the bleacher but should be removed before using the solution.

*Poison—Danger.

FILM CLIPS — Stainless Steel		Per Dozen
Spring Type — cannot pierce or crimp film		\$2.75

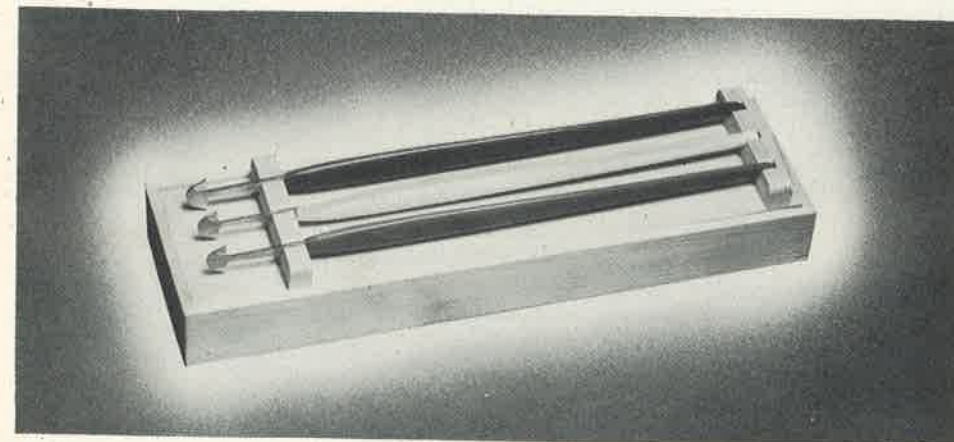
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FILM SCRIBING TOOLS — Scriber Sets

Ruling of lines on negatives has long been a problem for lithographers. The old method of using a scratch knife, needle or other pointed instrument has proven unsatisfactory because such tools give a "V" cut, which usually causes spread images on the plate. Also, uniformity of width of rule was difficult to maintain because this was dependent upon the angle at which the tool was held by the operator and the pressure he exerted. But now, a scientifically-designed tool has been developed for the specific job of scribing rules on negatives — easier, faster and better!

The instruments shown below are packaged in sets of 3 tools, and each tool has 2 cutting heads. Four single rules . . . varying in width from a hair-line to a one-point rule; one double hair-line and one double-heavy rule can be scribed with these instruments.

Remember — the width of the rule does not depend on holding the tool in a particular manner — nor does it depend on the depth of the cut.



Price per set\$25.00

Flannel — 46" wide

Highest Quality Wool of Uniform Thickness

Weight	Yds. per Roll	Less Than Roll	Roll Price
17 oz.	40	\$2.65 per yd.	\$2.50 per yd.
24 "	40	3.65 "	3.45 "
29 "	40	4.40 "	4.20 "
32 "	40	4.90 "	4.65 "
37 "	40	5.60 "	5.35 "
46 "	40	7.00 "	6.60 "
54 "	40	8.10 "	7.75 "

Over Fifty Years of Service to the Graphic Arts

FLANNEL COVERS — Silk Sewn

FOR ROLLERS WITH FINISHED DIAMETER OF 2¼" OR UNDER

First Flannels

Length	Price Each
14".....	\$.70
16".....	.75
18".....	.85
20".....	.95
24".....	1.05
26".....	1.15
28".....	1.30
30".....	1.35
33".....	1.40

Second Flannels

Length	Price Each
14".....	\$.75
16".....	.80
18".....	.90
20".....	1.00
24".....	1.10
26".....	1.20
28".....	1.35
30".....	1.45
33".....	1.55

FOR ROLLERS WITH FINISHED DIAMETER OF 2¼" OR OVER

First Flannels

Length	Price Each
32".....	\$1.45
36".....	1.55
40".....	1.65
44".....	1.75
46".....	1.90
48".....	2.00
50".....	2.10
53".....	2.30
55".....	2.40
60".....	2.55
65".....	2.65
68".....	2.75

Second Flannels

Length	Price Each
32".....	\$1.55
36".....	1.65
40".....	1.75
44".....	1.90
46".....	2.00
48".....	2.10
50".....	2.20
53".....	2.45
55".....	2.55
60".....	2.65
65".....	2.75
68".....	2.90

FLANNEL DISCS

4" diameter\$3.75 per lb.
Used for developing-out litho press plates

FLANNEL SCRAPS

Irregular Pieces\$1.25 per lb.

FLANNEL TUBING — (See Seamless Tubing)

FUNNELS — Ribbed Glass

Size	Price Each
8 oz.....	\$.50
16 oz.....	.70
32 oz.....	.90
64 oz.....	1.10
128 oz.....	1.95

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FUNNELS — Plastic — Filter Type

These funnels contain a built-in stainless steel fine mesh strainer. Excellent for straining photographic solutions, and albumen and deep-etch plate coatings. Only one size available at present.

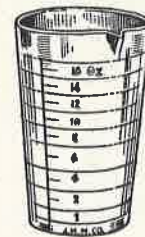
8 oz.	\$1.00 each
16 oz. (no strainer)	1.00 each

GLOVES — Rubber (Curved Finger Construction)

	Color Black	Length	Sizes	Price Each
#20	Light Weight	10½"	9½ to 11	\$1.25
#40	Medium Weight	12"	9½ to 11	1.75
#60	Heavy Weight	14"	9 to 11	2.85

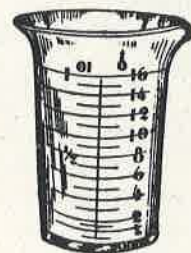
GRADUATES — Glass

Moulded Tumbler



Size	Price Each
2 oz.	\$.20
4 oz.	.30
8 oz.	.40
16 oz.	.70
32 oz.	1.10

Etched Tumbler



Size	Price Each
2 oz.	\$.85
4 oz.	1.00
8 oz.	1.45
16 oz.	1.90
32 oz.	2.85

Cone Shape



Size	Price Each
1 oz.	\$.75
2 oz.	.90
4 oz.	1.00
8 oz.	1.35
16 oz.	1.90
32 oz.	2.90

HYDROMETER JARS — Glass

No.	Height, inches	Price Each
A	8	\$.67
B	12	.83
C	15	1.00
D	18	1.75

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HYDROMETERS — 12" for Heavy Liquids

HYDROMETERS — Specific Gravity

For heavy liquids, graduated in 0.002 divisions, and calibrated at 60°F. Length 11 inches.

No.	Range, Specific Gravity	Price Each
A	1.000 — 1.220	\$1.00
B	1.200 — 1.420	1.00
C	1.400 — 1.620	1.00
D	1.600 — 1.820	1.00
E	1.800 — 2.000	1.00

HYDROMETERS — BAUMÉ

For heavy liquids, graduated in 1/10° divisions, and calibrated at 60°F. Length 12 inches.

No.	Range, Degrees Baumé	Price Each
A	0 — 11	\$1.50
B	9 — 21	1.50
C	19 — 31	1.50
D	29 — 41	1.50
E	39 — 51	1.50
F	49 — 61	1.50
G	59 — 71	1.50

For heavy liquids, graduated in ½° divisions, and calibrated 60°F. Length 11 inches.

H	0 — 35	\$1.25
I	35 — 70	1.25

For heavy liquids, graduated in 1° divisions, and calibrated at 60°F. Length 11 inches.

J	0 — 70	\$1.00
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HYGROMETERS — TAYLOR

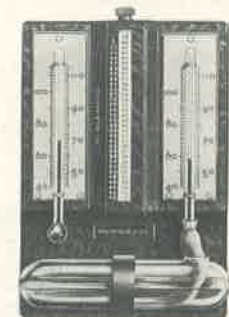
Hampton Humidiguide
No. 5538 — \$4.00 ea.



A perfect combination. An indoor Permacolor thermometer and a direct reading hygrometer attractively mounted in a modern black molded case 3¾" x 5¼" x 1½". Ivory dial and scale with black figures.

STEWART HUMIGUIDE

No. 5534 — \$5.50 ea.



Designed for indoor use, the brown finished plastic case blends nicely with most interior finishes. Has revolving humidity tables and easy filling reservoir, and magnifying lens tubes are filled with non-fading red liquid. Complete with spare wicks and instructions.

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

KNIVES — INK

When available, both spatula and broad blade types. Prices upon request.

KNIVES — GILLETTE (Stripping)

Handle No. 410



Each knife is contained in a leather and metal guard case and packed in individual carton.
Price \$1.00 each — Replaceable blades — per packet of five..... .50

Handle No. 411



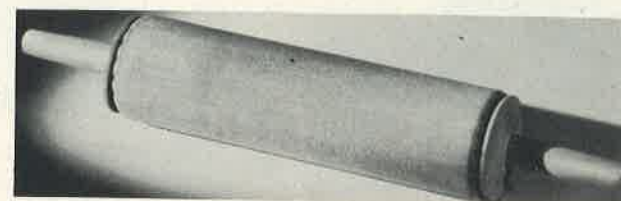
Price .75 each



312 313 314 316
Replaceable blades made in four sizes as illustrated. Packed five of one size in a packet.
Per packet of five..... .50

LEATHER HAND ROLLERS — for Proofing or Transferring

Made of seasoned maple blocks, with under-cover of flannel and choice calf-skin cover.



Size	Price Each	• Size	Price Each
12"	\$10.40	15"	\$12.15
13"	10.95	16"	12.45
14"	11.55	18"	13.30

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

LEATHER HAND ROLLER RECOVERING SERVICE

Size	New Skin	New Flannel and Skin	Size	New Skin	New Flannel and Skin
12"	\$3.80	\$7.25	15"	\$5.20	\$ 8.65
13"	4.35	7.80	16"	5.75	9.25
14"	4.95	8.40	18"	6.65	10.15
Re-flanneling			\$3.50		
New Seam			2.00		
Block only			2.75		
Preparing .....			.75		
Sewn Handles			1.35		

LEATHER PRESS ROLLER RECOVERING SERVICE

The leather covers used in recovering your rollers are made from the best available quality domestic or imported hides. R & P leather distributor rollers are precision-fabricated on especially built machines and scientifically tested to allow for a maximum safe stretch in the leather when installed on the roller, thus eliminating completely all twisting, stretching or shrinkage when in use. These rollers will not chip, crack or blister under present high-speed lithographic press operating conditions, and you are always assured of a smoother, cleaner flow of ink day in and day out without the need of frequent re-grinding.

The average life of R & P leather distributor rollers is 10 years, as compared with 1 to 3 years for rubber and composition rollers.

Regardless of whether rubber or composition rollers have been used in the past, the majority of roller cores now in use can readily be covered with leather. Delivery of any reasonable quantity of leather distributor rollers can be made within two weeks of receipt of orders.

Size	New Skin	New Flannel and Skin	Size	New Skin	New Flannel and Skin
23"	\$ 8.70	\$13.35	46"	\$14.65	\$20.95
28"	9.25	14.65	48"	15.25	21.60
30"	9.85	15.25	52"	16.15	23.20
32"	10.40	15.90	54"	16.85	23.85
36"	12.70	17.15	60"	18.45	26.40
40"	14.10	18.45	66"	20.35	28.25
44"	14.30	20.00	71½"	21.95	30.15

Above prices apply to rollers 2½" to 3½" dia.
Add 2.00 extra for rollers over 3½" dia.

Preparing Rollers — 1.50 each

Re-flanneling	Size	Price Each	Extra Layer of Flannel	Size	Price Each
	23"	\$4.90		23"	\$2.90
	36"	7.15		36"	3.30
	40"	7.45		40"	3.85
	50"	8.80		50"	4.70
	66"	9.65		66"	5.50

LENS TISSUE

Soft, silky tissue sheets size 4 by 6 inches. Bound neatly in a book of 50 sheets, and perforated for easy removal.

Price per book \$.25

LITHO NEEDLES (See Needles-Litho)

LITHO PLATES — Aluminum and Zinc

New plates stocked when available — grained and ungrained — all standard sizes and gauges.
Prices upon request.

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

LITHO SHEETS — Cellulose Acetate (Clear Transparent)

Size	Thickness	Price
20" x 50" Sheets	.003"	\$.40 per sheet
Rolls, 40" wide up to 1000 feet long		.20 per foot
20" x 50" Sheets	.005"	.64 per sheet
Rolls, 40" wide up to 1000 feet long		.33 per foot
20" x 50" Sheets	.0075"	.80 per sheet
Rolls, 40" wide up to 1000 feet long		.40 per foot
20" x 50" Sheets	.010"	.97 per sheet
40" x 50" Sheets		1.93 per sheet
Rolls, 40" wide up to 1000 feet long		.49 per foot
20" x 50" Sheets	.015"	1.75 per sheet
40" x 50" Sheets		3.50 per sheet

LITHO SHEETS — PLASTIC

These plastic sheets are made from a vinyl chloride acetate base, having unusual stability and low moisture absorption for accurate drawings and close tolerance reproduction. Although these sheets are processed to a standard size of 51 3/4" x 150", special sizes and surfaces can be furnished upon request.

"DYRITE" — A transparent plastic sheet, matte surface on one side.

"LOFTRITE" — A translucent white plastic sheet, matte surface on one side.

#05 "DYRITE" — .005"					
26" x 37 1/2"	\$2.00 ea.		Minimum Quantity	2 sheets	
26" x 75"	4.00 ea.		"	"	1 "
26" x 150"	7.50 ea.		"	"	1 "
#10 "DYRITE" — .010"					
37 1/2" x 25 7/8"	\$2.00 ea.		Minimum Quantity	4 sheets	
37 1/2" x 51 3/4"	4.00 ea.		"	"	2 "
51 3/4" x 75"	8.00 ea.		"	"	1 "
51 3/4" x 150"	15.00 ea.		"	"	1 "
#15 "DYRITE" — .015"					
37 1/2" x 25 7/8"	\$2.25 ea.		Minimum Quantity	4 sheets	
37 1/2" x 51 3/4"	4.50 ea.		"	"	2 "
51 3/4" x 75"	9.00 ea.		"	"	1 "
51 3/4" x 150"	17.00 ea.		"	"	1 "
#20 "LOFTRITE" — .010"					
27 1/8" x 37 1/2"	\$2.00 ea.		Minimum Quantity	4 sheets	
37 1/2" x 51 3/4"	4.00 ea.		"	"	2 "
51 3/4" x 75"	8.00 ea.		"	"	1 "
51 3/4" x 150"	15.00 ea.		"	"	1 "
#25 "LOFTRITE" — .015"					
27 1/8" x 37 1/2"	\$2.25 ea.		Minimum Quantity	4 sheets	
37 1/2" x 51 3/4"	4.50 ea.		"	"	2 "
51 3/4" x 75"	9.00 ea.		"	"	1 "
51 3/4" x 150"	17.00 ea.		"	"	1 "

Also available in the following emulsions:

#30 "LOFTRITE"	.010"	An opaque white plastic sheet, matte surface on one side.
#35 "LOFTRITE"	.015"	
#45 "LOFTRITE"	.015"	
#10 "SCRIBERITE"	.010"	A "DYRITE" sheet coated with a green lacquer for making scribe lines — makes a direct negative.
#15 "SCRIBERITE"	.015"	
#50 "SCRIBERITE"	.010"	
		A black plastic sheet with a surface of white lacquer for making scribe lines.

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ROBERTS & PORTER, INC.

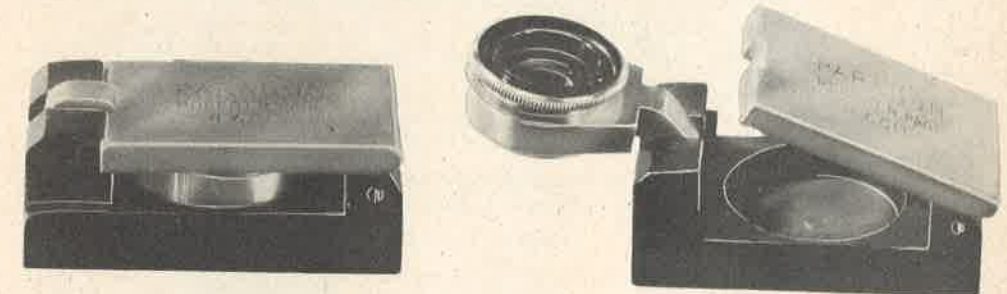
MAGNIFIERS — The Century Quadruple

9X Power — Corrected Triple Lens 3/8" in diameter.

Price each\$10.75



MAGNIFIERS — Paragon



9X Power — Corrected Triple Lens 3/8" in diameter. Set in protective folding frame that is impervious to chemicals\$12.75 each

MAGNIFIERS — Paragon (Camera Type)



9X Power — Corrected Triple Lens 3/8" in diameter. Has extra deep barrel permitting extended focusing range for detail magnification through CAMERA GROUND GLASS; lock rings for maintaining fixed focus.

Price each\$15.00

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MAGNIFIERS — PIKE

"FLASH-O-LENS" is a new and original creation — much copied but not equalled. The lenses are of the highest grade in their type. Tens of thousands are in daily use with the armed forces for mapping, chart reading, photographic interpretations, etc.

"FLASH-O-LENS"

The Illuminating Magnifier

One model is powered by dry cells; the other by current from any A. C. or D. C. outlet. Both units are interchangeable in lens housing. Lenses are easily removed for cleaning. Illumination is so devised that direct rays cannot reach eyes of user. The lenses are set in lustrous BAKELITE PLASTIC frames.

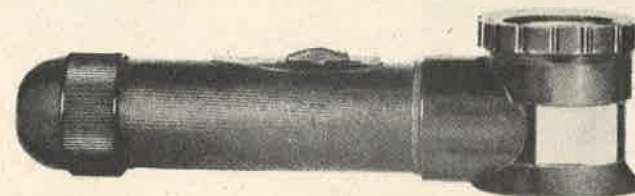
Electrical unit is fitted with special "Dalite" bulb giving a soft, white light.

The Pike "FLASH-O-LENS" magnifying unit is a double and triple lens system. The lenses are precision ground and polished to an exact curvature.

The unit is easily taken apart for cleaning, and when reassembled the lenses are automatically re-focused by the spacer ring.

A side opening in the lens housing makes it possible to use instruments or pencil on the object under observation.

The field of vision is illuminated by an electric bulb so placed in the handle that direct light does not reach the eye.



Non-Achromatic Lenses

BATTERY MODEL—5 Power.....	\$ 9.35
BATTERY MODEL—7 Power.....	14.85
ELECTRIC MODEL—5 Power.....	12.65
ELECTRIC MODEL—7 Power.....	18.15

In the "FLASH-O-LENS" the various combinations of lenses are all interchangeable in the one lens housing. The lens sets can be furnished separately.

The 5 power magnifier has a 2" field of vision with a working distance of 1 1/4". The 7 power magnifier has a 1" field and a working distance of 3/4".

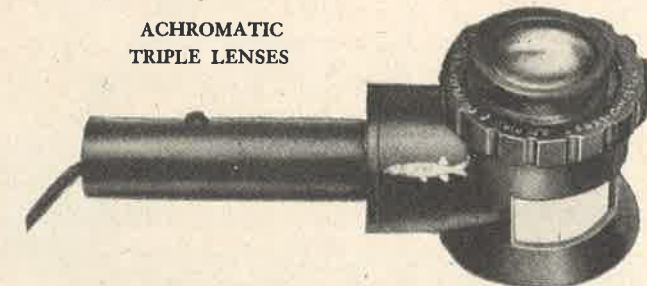
In using the "FLASH-O-LENS" it is well to remember that best results will be obtained if the lens is placed directly (flat) on the object under observation. The lenses in the 5 and 7 power (shown above) are NON-ACHROMATIC and are automatically focused. In these models it is necessary to place the eye within two or three inches of the top lens, as this will tend to eliminate any distortion or color.

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MAGNIFIERS — Continued

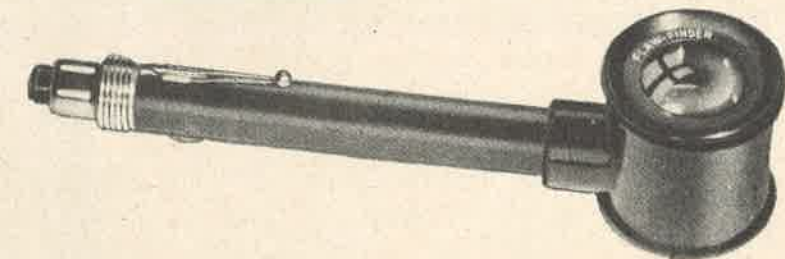
This new Illuminated Magnifier powered with Bausch & Lomb Achromatic lenses is especially adapted for printers, engravers, lithographers, photographers, paper dealers, chemists, etc. The lenses are finely corrected affording a flat, sharply defined field of view, eliminating all distortion and color. The mount is threaded for focusing.

ACHROMATIC
TRIPLE LENSES



BATTERY MODEL—4 1/2 Power.....	\$20.35
BATTERY MODEL—7 Power.....	25.85
ELECTRIC MODEL—4 1/2 Power.....	23.65
ELECTRIC MODEL—7 Power.....	29.15

"FLAW-FINDER"



This Illuminating Magnifier, 10X Magnification, with threaded mount for accurate focusing. Equipped with one piece battery case, which can be used as independent flash light.

The double lens system is enclosed in a Bakelite dust proof container, but is easily taken apart should cleaning be necessary at any time. This lens is especially desirable for any work where accurate and quick inspections are necessary. The Aplanatic lenses (two) are ground and polished from first grade optical glass and have a field of vision of approximately 3/8 inch.

The housing or lens head is moulded from black Cellulose Acetate, the lens holder and adjustable threaded mount of lustrous black Bakelite. The former having an "elastic" like substance the battery case can be plugged in and easily taken out.

Price	\$ 7.50
In Leather Case	10.00

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MAGNIFIERS — Continued

With the Pike "ELECTRIC READER," you can read *whatever* you want, *when-ever* you want.

And you can get the exact magnification you need too.

Yes, the *exact* magnification. At two inches, the Pike "ELECTRIC READER" magnifies 1½ times; at four inches, 2 times; at six inches, 3 times.

See Clearly and Distinctly Without Straining Your Eyes

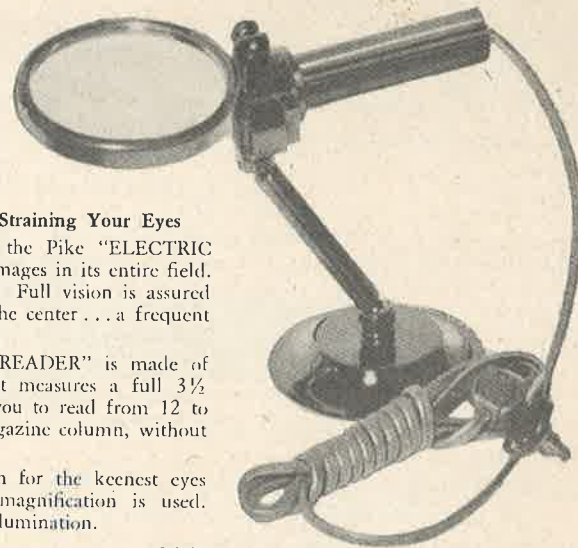
Unlike the ordinary reading glass, the Pike "ELECTRIC READER" produces sharp, *illuminated* images in its entire field. Type matter becomes clear and distinct. Full vision is assured anywhere in the glass, and not just in the center... a frequent complaint with ordinary reading glasses.

The lens of the Pike "ELECTRIC READER" is made of precision ground and polished glass. It measures a full 3½ inches across—large enough to enable you to read from 12 to 18 lines of an ordinary newspaper or magazine column, without *once* moving the Reader.

Proper illumination—important even for the keenest eyes—becomes absolutely necessary when magnification is used. The Pike Electric Reader supplies this illumination.

Battery Model, 3½" dia. \$6.50
Electric Model, 3½" dia. 9.50

Adjustable (ball and socket) Bench Stand \$5.00 extra



ELECTRIC MODEL
(with Bench Stand)

THE WIDE FIELD TUBE is a complete wide field, low power microscope, with many uses in the shop and factory.

When adapted to the "FLASH-O-LENS" the Wide Field Tube is used in much the same manner as a hand magnifier but has a working distance of several times greater. It permits the observation of work carried on several inches from the objective lens. Surfaces can be examined most conveniently—the adapter holds the tube at the proper distance, maintaining the focus while observing different areas. Whenever the work demands more careful observation, greater working distance and higher power magnification than afforded by the regular "FLASH-O-LENS" the Wide Field Tube will prove of value.

The instrument is used in the trades for examining raw material, castings, welds, etc., as well as laying out fine work. Being portable it can be used in the darkest corner of the shop or workroom. The instrument has a high eyepoint position, enabling the wearer of glasses to observe the entire field without discomfort. It forms an inverted and reversed image as does the ordinary mon-objective microscope. It is finished in chrome and black. Magnification 20X.



Illustration showing 40X Electric Model

Flash-O-Lens with Wide Field Tube, Battery Model—20X \$44.50
Flashh-O-Lens with Wide Field Tube, Electric Model—20X 48.50
Flash-O-Lens with Portable Microscope, Battery Model—40X 59.50
Flash-O-Lens with Portable Microscope, Electric Model—40X 63.50

Over Fifty Years of Service to the Graphic Arts

MOLESKIN — Prices upon request

MOLESKIN ROLLER RECOVERING SERVICE — Prices upon request

MOLESKIN SLEEVES — Silk Sewn — Prices upon request

MOLLETON

Size No.	Width in Inches	Less than Roll	Roll Price	Multiple Roll Lot
#100	40	\$4.10 per yd.	\$3.95 per yd.	\$3.80 yd.
#100W	44	4.60 "	4.45 "	4.30 "
#310	40	4.55 "	4.40 "	4.25 "
#310W	44	5.05 "	4.90 "	4.70 "
#420	40	5.20 "	5.00 "	4.80 "

Note: #100 and 100W (light-weight) 28 oz.
#310 and 310W (medium-weight) 34 oz.
#420 (heavy-weight) 42 oz.

MOLLETON COVERS — Speedjacket (See Tables Below for Sizes and Prices)

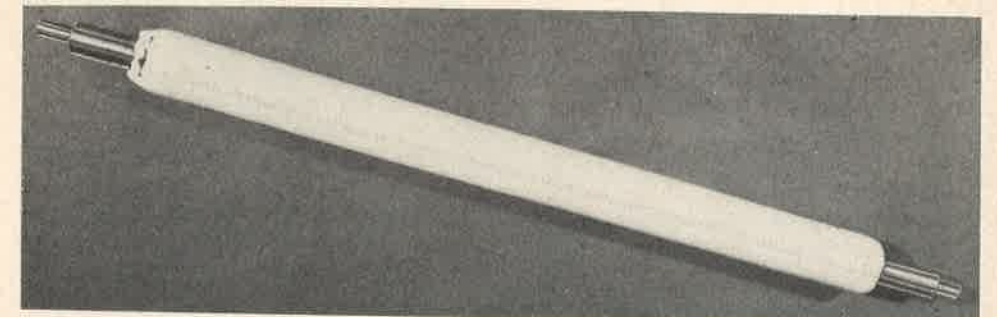


Illustration shows dampener roller covered with Robport Speedjacket

MOLLETON COVERS — Sewn

The seams on these Molleton Covers are machine-sewn with silk and the covers themselves are manufactured from the best obtainable domestic or imported Molleton.

After the covers are manufactured, they are put through a special brushing machine which loosens and eliminates the surplus lint and, therefore, you are assured of the minimum difficulty in shedding of lint after dampener rollers are placed in operation. These sewn Molleton Covers can be installed on the roller either by hand or through the use of our Robport Speedjacket Machine.

For rollers with finished diameter of 2¼" to 2⅝"

Weights		#100 Light Weight	#310 Medium Weight	#420 Heavy Weight			#100	#310	#420
Length		#100	#310	#420	Length		#100	#310	#420
12"		\$.64	\$.69	\$.74	50"		\$1.77	\$1.93	\$2.09
16"		.76	.82	.89	52"		1.83	2.00	2.15
20"		.87	.94	1.02	54"		1.89	2.07	2.22
24"		.99	1.07	1.16	56"		1.94	2.15	2.30
26"		1.05	1.13	1.23	58"		2.00	2.20	2.35
28"		1.10	1.20	1.30	62"		2.12	2.32	2.47
32"		1.21	1.31	1.44	66"		2.23	2.45	2.60
36"		1.31	1.43	1.58	70"		2.35	2.58	2.73
38"		1.40	1.52	1.68	74"		2.46	2.70	2.85
42"		1.53	1.66	1.82	78"		2.58	2.83	2.98
46"		1.66	1.79	1.96					

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

MOLLETON COVERS — (continued)

For rollers with finished diameter of 3" to 3⁵/₁₆"

Length	#100	#310	#420	Length	#100	#310	#420
38"	\$1.56	\$1.70	\$1.87	58"	\$2.21	\$2.41	\$2.67
40"	1.63	1.76	1.95	62"	2.34	2.55	2.83
42"	1.69	1.85	2.03	66"	2.47	2.69	2.99
46"	1.82	1.99	2.19	70"	2.59	2.83	3.15
50"	1.95	2.13	2.35	72"	2.65	2.90	3.23
54"	2.08	2.27	2.51	74"	2.71	2.97	3.31
56"	2.14	2.34	2.60	78"	2.83	3.11	3.47

For rollers with finished diameter of 3¹/₂" to 3¹³/₁₆"

Length	#100	#310	#420	Length	#100	#310	#420
38"	\$1.76	\$1.92	\$2.12	62"	\$2.66	\$2.90	\$3.24
42"	1.91	2.09	2.31	66"	2.81	3.06	3.42
46"	2.06	2.26	2.50	70"	2.95	3.22	3.60
50"	2.21	2.42	2.69	74"	3.09	3.38	3.78
54"	2.36	2.58	2.88	78"	3.23	3.54	3.96
58"	2.51	2.74	3.06				

MULTILITH PRESS COVERS

Molleton covers are silk-sewn. Simply slip on the roller and tie the laced ends.

If the customer prefers to sew his own covers on the roller, he may purchase them flat. These are also supplied with laced ends.

Molleton covers are supplied in sets of two — 1 ductor (small sleeve) and 1 form (large sleeve). These covers may also be purchased separately.

Sewn Molleton Covers

Press Size	Price per Set	Price in Doz. Sets
* #40 Duplicator	\$1.70	\$1.55
#1200	2.15	1.90
#1300	2.50	2.25
#2000	2.75	2.50
#2066	2.75	2.50

* (The #40 Duplicator set consists of 1 linen cover and 1 molleton cover).

Flat Molleton Covers

Press Size	Price per Set	Price in Doz. Sets
#1200	\$1.75	\$1.50
#1300	2.00	1.75
#2000	2.25	2.00
#2066	2.25	2.00

Sewn Linen Covers

#40 Duplicator	.45
#1200	.45
#1300	.55
#2000	.65
#2066	.65

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

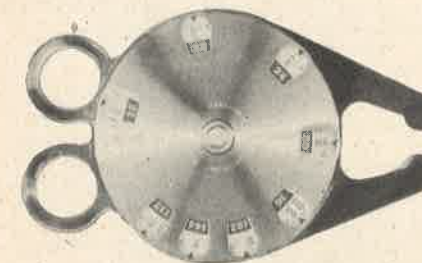
NEEDLES — Litho

	Price Each	Price per Doz.
	\$1.25	\$12.00
Round		
Flat		
Oval		
Square		
Diamond Shape		

NEEDLES — Sewing (for Dampener Rollers)

3¹/₂" long \$1.25 per dozen

PAPER COUNTER — Hartford



To use the Counter, hold it like a pair of scissors and close the jaws firmly on a pile of paper. The number of sheets in the pile will show on the scale in the window marked with the weight (substance) of the paper being counted. A handy gadget for the printer.

Priced at \$3.50 each

PAPER CUTTERS — See Trimming Boards

PAPERS

Cellulose Wiping Paper — 12" x 18"	\$.38 per lb.
Orange Masking Paper — 25" x 38"	
50 sheets	\$ 2.75
100 sheets	5.25
500 sheets	25.00

ROBPORT MASK-O-LITH PAPER — 38" x 50"

Mask-O-Lith paper is a coated two-side enameled sheet of warm red color that was developed to make certain that a positive block-out of arc lamp rays takes place. Tests have been made for the past year and the opinion, of those who used it, is very high.

Users claim it is superior to yellow or orange sheets and considerably superior to any sheet that is coated one side only.

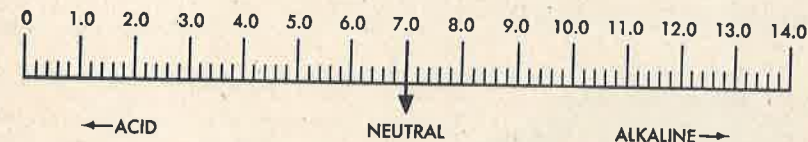
1 to 99 sheets	\$22.50 per hundred
100 sheets and over	17.25 per hundred

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pH CONTROL — ITS USE IN LITHOGRAPHY

The term pH, which is used to express acidity and alkalinity, has become quite common in offset but its practical application to fountain solutions and coating mixtures is not always clearly understood. When it is realized that making a pH determination is almost as simple as taking temperature with a thermometer or density with a hydrometer, controlling lithographic processes by pH measurements will become simple routine.

The pH scale is merely a scale showing active acidity and alkalinity just as the Fahrenheit thermometer scale shows temperature. A temperature of 70° F is regarded as a comfortable mean. Temperatures below 70° indicate increase in coldness and the lower the reading the colder it is. Temperatures above 70° indicate increase in heat and the higher the temperature the hotter it is.



On the pH scale, shown above, pH 7.0 denotes neutrality, that is at pH 7.0 a solution is neither acid nor alkaline. Values below 7.0, such as 6.0, 4.6, 3.8, etc., denote active acidity and the lower the pH value the greater is the active acidity. Values above 7.0, such as 7.6, 8.4, etc., denote active alkalinity and the higher the pH value the greater is the active alkalinity. These numbers represent absolutely definite degrees of acidity and alkalinity and a statement such as "keep the fountain solution at pH 3.8" or "maintain the coating mixture at pH 7.6," has a very definite meaning. Also such determinations enable the operator to make up each batch with exactly the same acidity or alkalinity as well as to maintain these values throughout an individual run.

The outstanding application of pH is in control of the fountain water. The function of the fountain solution is to keep the plate in optimum condition during the printing operation. When the acid is too weak (too high pH) the non-printing areas of the plate lose resistance to the ink and become greasy. When the acid is too strong (too low pH) the metal of the plate may be attacked too rapidly and the albumin image may undergo excess swelling and lose its ink receptive properties. The fountain solution should therefore be kept at moderate acidity as shown by actual pH measurements.

When rule of thumb methods are followed the fountain solution is adjusted from time to time to overcome any tendency for the work to become thick or sharp, the dampening water being made stronger or weaker depending on the judgment of the pressman. Radical changes frequently occur because there is no accurate way of telling what the true acidity of the fountain solution may be. Samples from presses in operation, where no accurate control of the fountain water is practiced, may vary in pH from 2.0 to over 7.0. Pronounced variations may result in shortening the life of the plate.

Several factors may change the pH of the fountain solution. Contact with the metals of the fountain, the rollers, and the plates tends to exhaust the acids in the solutions and cause a rise in pH. Solutions left in the fountain overnight sometimes show an increase in pH of 1 to 2 pH units. Evaporation of water increases the concentration of nonvolatile substances and thus modifies the pH. Materials in the ink and paper may affect the pH of the fountain solution.

The acidity of the fountain solution can be regulated by the addition of the acid constituent alone. In making up a fountain solution, it is best to start with a relatively small amount of the acid material, test the solution for pH and then add more acid to reach the desired pH, since it is much simpler to lower the pH than to raise it by the addition of some alkaline material.

The water supply is an important factor since waters vary considerably in different parts of the country. Some waters are slightly acid while others may contain considerable quantities of alkaline salts and have pH values of 8.0 or higher. Consequently the problem of preparing fountain solutions and maintaining them at some definite pH value may vary with the locality. Such effects may be avoided by using distilled water.

With regard to the best pH values to be maintained in the fountain solution, values close to pH 3.8 for zinc plates and pH 4.6 for aluminum plates have been recommended. In general, practical experience has checked these recommendations rather closely. However, the pH value of the fountain solution is varied somewhat with different inks and papers and the best value should be determined on the job. The important point is that the pH be controlled.

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In addition to control of fountain solutions, pH control of the albumin coating mix is useful, particularly when ammonia is added. Albumin coating solutions to which no ammonia has been added will have pH values near 5.2 to 5.6. When ammonia is added, the pH will be higher. In such cases the amount of ammonia should be accurately controlled and only enough added to bring the pH to the best value. A final pH of 7.6 using phenol red as indicator has been recommended. Ammonia not only clears up the coating solution but affects the sensitivity, the more ammonia added, the slower the sensitivity.

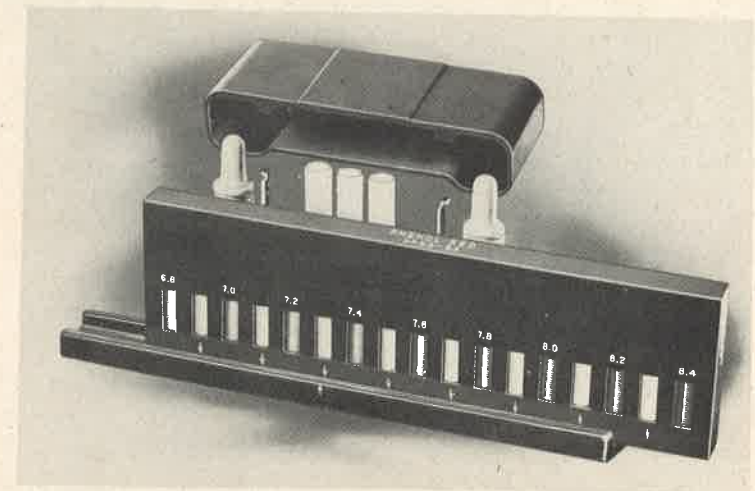
Control of pH is not a cure-all for the headaches of the offset pressman. It can never supplant the know-how of the operator. However, it does substitute measurement of one important factor for guesswork. It has been of great help in tracing press troubles to their source and in maintaining continuous and high quality production.

RECOMMENDATIONS:

Fountain Solution — Taylor pH Slide Comparator, Model T-0 or T-1, Bromphenol Blue (for zinc plates) or Bromcresol Green (for aluminum plates).

Coating Mixture — Model T-0 or T-1, Phenol Red (if ammonia is added) Chlorphenol Red (if no ammonia is added).

If two slides are desired, Model T-2 is recommended. For 3 or more slides, the Long Range or Dalite Comparator.



Taylor pH Slide Comparator, Model T-0

Consists of a base and slide, both molded from plastic. Base contains 2 vials of indicator solution with 0.5ml pipettes and 5-5ml test tubes. Each color standard slide contains 9 standards for any given indicator, such as bromphenol blue, alternating with ampoules of water. All slides are marked with the indicator name and pH values. The complete Comparator is 10 in. long, 2 1/4 in. wide and 4 in. high and weighs only 1 1/2 lbs. The set is flexible as all slides work on the same base. The simplicity of operation, shown under "Determinations in 3 Simple Operations" is facilitated by arrows on slide and base, which show when the slide is in the proper position for making color comparisons.

All Taylor Color Standards carry an **unlimited guarantee** against fading.

Prices

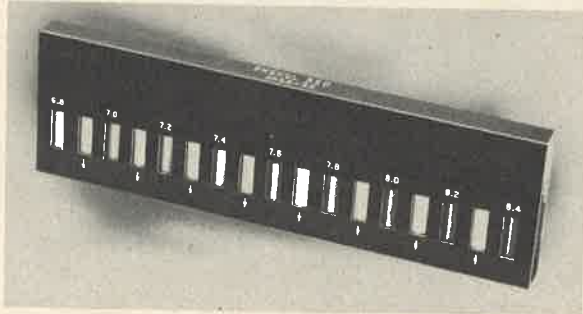
Taylor pH Slide Comparator, Model T-0	\$17.00
Extra pH Color Standard Slides, each	9.00

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Determinations in 3 Simple Operations



- 1. Remove the top from the base. Remove three of the test tubes from the base, fill to the mark (5ml) with the sample to be tested and replace them in the holes back of the three slots in the base.
- 2. To the middle tube add 0.5ml of indicator solution by means of the pipette and mix thoroughly.
- 3. Place the color standard slide on the base and, holding the instrument toward a window or other source of daylight, move it in front of the test samples until a match is obtained. The pH is then read off directly from the values on the slide.



Taylor pH Color Standard Slides

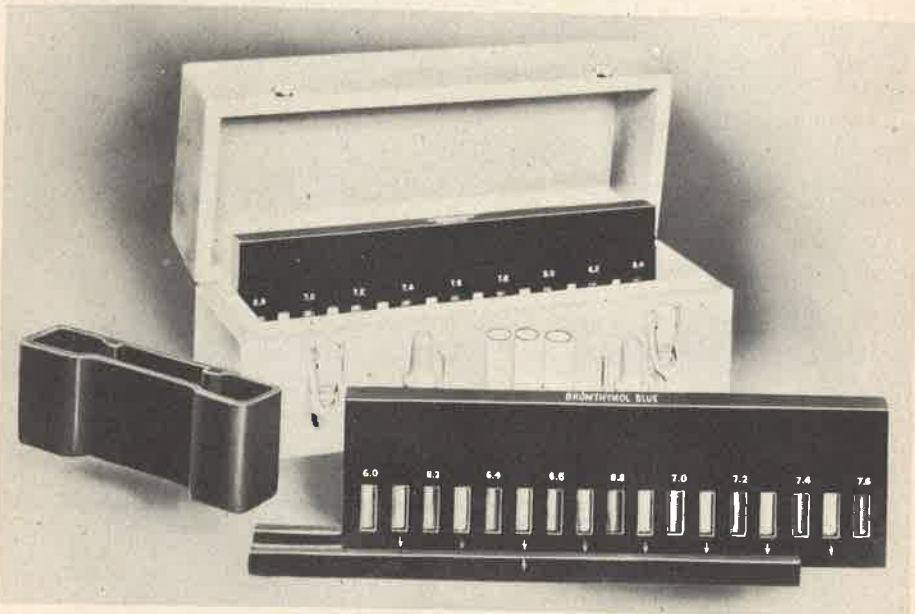
All Taylor Color Standards are supplied in closed plastic slides, 10 in. long, 2 1/2 in. wide and 3/8 in. thick. Each slide contains 9 color standards for any one indicator, in intervals of 0.2 pH, and 8 ampoules of distilled water. All slides are marked with the indicator name and pH values. Arrows on the slide greatly simplify operation.

All Taylor Color Standards carry an unlimited guarantee against fading.

Indicator	pH Range	Color Change
Benzo Yellow	2.4-4.0	Red-Yellow
Bromphenol Blue	3.0-4.6	Yellow-Blue
Bromcresol Green	3.8-5.4	Yellow-Blue
Chlorphenol Red	5.2-6.8	Yellow-Red
Phenol Red	6.8-8.4	Yellow-Red
Thymol Blue	8.0-9.6	Yellow-Blue

Prices
Slides, each (including vial of indicator and pipette).....\$9.00

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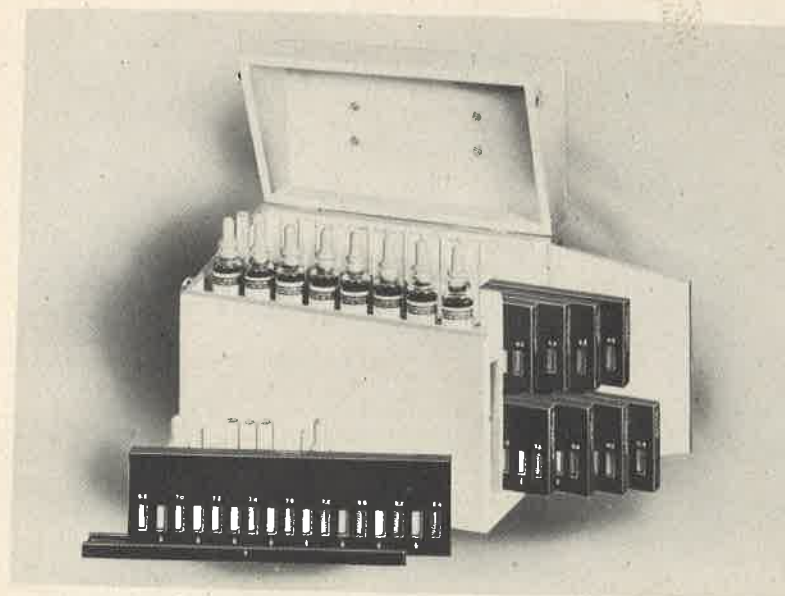
Taylor pH Slide Comparator, Models T-1 and T-2

Model T-1 consists of a Taylor pH Slide Comparator, Model T-0, in a strong wooden case 10 3/4 in. long, 3 3/8 in. wide and 4 1/4 in. high, with a handle for carrying. Total Weight 3 1/2 lbs. Model T-2 is similar to Model T-1 except that it contains an extra color standard slide. Weight 4 1/8 lbs. Model T-2 is the one illustrated above. The case serves not only to keep the equipment together in portable form but also to protect it from dust and dirt when not in use.

All Taylor Color Standards carry an unlimited guarantee against fading.

Prices	
Taylor pH Slide Comparator, Model T-1.....	\$22.00
Taylor pH Slide Comparator, Model T-2.....	31.00

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Taylor Long Range pH Slide Comparator
Models T-3, T-4, T-5, T-6, T-7, T-8, T-9

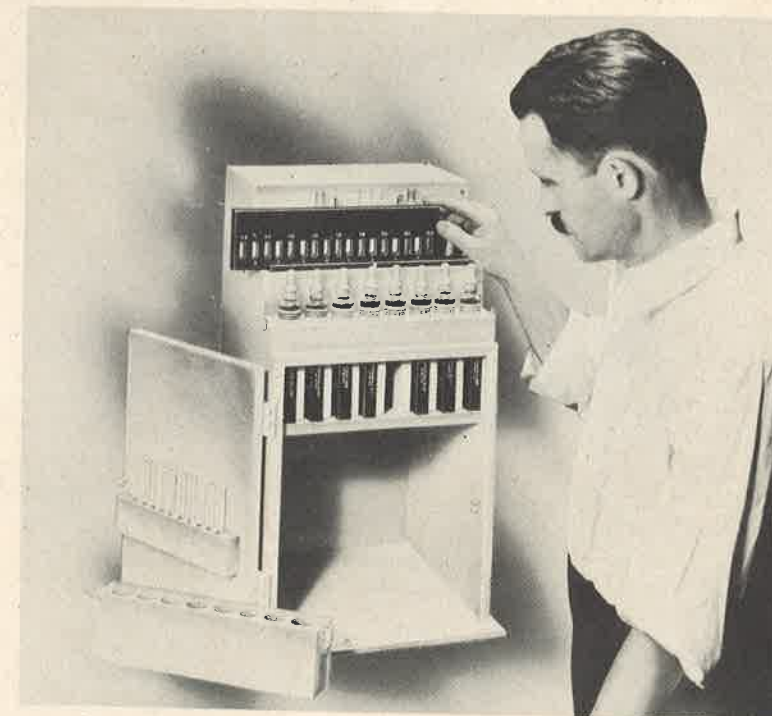
A portable outfit containing a Taylor pH Slide Comparator base, any 3 to 9 pH color standard slides, vials of the corresponding indicator solutions with 0.5ml pipettes and nipples, and 14-5ml test tubes. All equipment is contained in a wooden carrying case 11½ in. long, 5¾ in. wide and 9¼ in. high, with a leather handle. Number after T indicates number of slides in the set. The weight varies from 7½ lbs. for the Model T-3 to 11½ lbs. for the Model T-9. The set is flexible since if a Model T-3 is purchased the range can be increased by obtaining additional color standard slides.

All Taylor Color Standards carry an **unlimited guarantee** against fading.

Prices

Model No.....	T-3	T-4	T-5	T-6	T-7	T-8	T-9
Price.....	\$45.00	54.00	63.00	72.00	81.00	90.00	99.00

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Taylor Dalite pH Slide Comparator
Models D-3, D-4, D-5, D-6, D-7, D-8

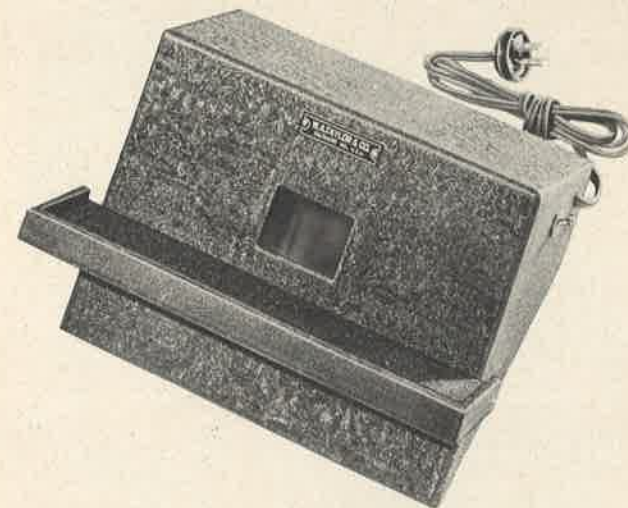
Originally designed for making determinations at night or in dark places, it is ideal for all routine testing, even in daylight. It contains a Model T-0 base which sits on a shelf in front of a dalite glass and special bulb, any 3 to 8 color standard slides, vials of indicator solutions with 0.5ml pipettes, and 10-5ml test tubes. All equipment fits in the 12 x 12 x 21 in. wooden case. Number after D indicates number of slides in set.

All Taylor Color Standards carry an **unlimited guarantee** against fading.

Prices

Model No.....	D-3	D-4	D-5	D-6	D-7	D-8
Price	\$55.00	64.00	73.00	82.00	91.00	100.00

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Taylor Midget Dalite Lamp

This Lamp was designed for use with Taylor Comparators when determinations must be made at night or in dark places. However, in many laboratories and plants it is almost impossible to obtain a clear daylight background for making color comparisons, because of walls, trees, etc. The midget Dalite Lamp gives uniform daylight conditions at all times and is therefore ideal for all routine testing even in daylight. In fact better matches are obtained in turbid or highly colored materials.

The Comparator base sits on the shelf at an angle of 45°, so that in making readings one can look directly into the slots in the slide and base. This eliminates handling the Comparator, with possible chance of breakage, as only the sample tubes need be handled.

The Midget Dalite Lamp is 10½ in. long, 7½ in. wide and 4½ in. high. It is fitted with a dalite glass, special bulb, cord, switch and plug and operates on any 110 V. circuit. It is a valuable addition to the Model T-0, T-1, T-2 and Long Range Comparators. However, when all determinations are to be made at night or in dark places, and a number of indicators are required, we recommend the Dalite Slide Comparator.

Price

Midget Dalite Lamp, complete.....\$10.00

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Taylor Dialyzer



When highly colored samples, such as coating mixtures containing dyes, are being tested for pH, the Taylor Dialyzer should be used. It consists of a glass rod with a 15mm glass cup sealed to the bottom. The cup end is inserted in a short length (6-8 in.) of cellophane tubing, the end of the tubing is twisted below the cup and then tied tightly with a piece of thread. The sack is then filled with distilled water and the assembly suspended in or forced into the sample.

The principle of the method is that hydrogen and hydroxyl ions can penetrate the membrane whereas suspended or colloidal matter cannot. Consequently when equilibrium is reached the practically clear solution inside the sack will have the same pH as the material outside the sack and the pH can be determined by means of a comparator. Equilibrium is usually in 5-15 minutes.

Price

Dialyzer, with cellophane tubing for 50 sacks.....\$2.50
Extra Dialyzer Tubing, 50 sacks..... 0.50

PHOTOGRAPHIC TAPE — See Tapes

PHOTOGRAPHIC TRAYS — See Trays

PILE COVERS — Robport Moisture-proof (For Humidity Control of Paper)



A. Printed sheets on a skid upon which a sheet of M-V-Bar was first placed.

Illustration #1

One of the ever-present difficulties encountered in the processing of paper products has been the control of the moisture content of the paper to preserve its workability characteristics. This problem has been especially acute in printing and lithographing plants, and in many cases lack of control has resulted in substantial loss.

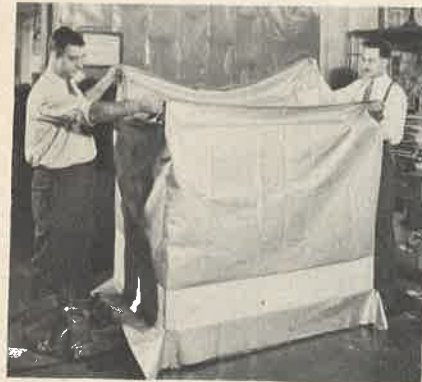
In tests recently conducted in a commercial plant, the use of a new material, Aquastop M-V-Bar, overcame the adverse conditions of humidity which have plagued the printing industry.

The enveloping material used in the tests is a synthetic impregnated, coated and chemically treated strong fabric which is both water-proof and moisture-proof.

In the tests conducted the printed sheets, as received from the presses, are loaded on skid platforms upon which a sheet of M-V-Bar was first placed as shown in Illustration #1. When the load is completed, an envelope or pre-fabricated bag of M-V-Bar is inverted over the load, as shown in Illustration #2.

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PILE COVERS — Robport Moisture-proof (Continued)



B. A prefabricated envelope of M-V-BAR is inverted over the load.
Illustration #2



C. The skid piece is turned up over the inverted M-V-BAR envelope and held in place by a fabric strap.
Illustration #3

The edges of the bottom sheet of M-V-Bar on which the load rests (note Illustration #1) are brought up and the envelope or bag drawn down over them. A temporary seal is then applied to hold the bag or envelope in place, as shown in Illustration #3.

This simple procedure resulted in maintaining the moisture content of the paper at a pre-determined level and kept the paper in proper working condition at all times.

After using the above method of protection for five months, for both warehouse stocks and for material in process, the plant executives pronounced this procedure an unqualified success.

The manufacturers of Aquastop M-V-Bar state that this material maintains its effectiveness at maximum relative humidity without cracking, tackiness, flow or loss of flexibility. Because of the strength of the base fabric, M-V-Bar has high resistance to scuffing and abrasion and may be used repeatedly without deterioration. Tests show that this material may be flexed a minimum of 135,000 times at 20 degrees below zero without cracking.

STANDARD SIZE	PRICE EACH
21" x 26" x 24"	\$ 8.00
26" x 40" x 30"	11.50
32" x 46" x 30"	14.75
40" x 52" x 40"	23.00
45" x 58" x 40"	25.50
46" x 62" x 40"	26.75
50" x 72" x 48"	31.50

Please write for sample and descriptive literature. Prices will be quoted upon request for sizes other than those listed above.

RUBBER COATING — Liquid (PHOTO-FLEX)

PHOTO FLEX in kits is particularly adaptable for repairing worn camera bellows showing pinholes or light streaks. Since this liquid rubber coating is impervious to practically all acids, it is also used to coat sinks, trays, and other darkroom articles.

PHOTO FLEX KITS

Small Size—Covers approx. ½ sq. ft.	\$2.00
1½ oz. PHOTO FLEX PRIMER (1 coat)	
3 oz. PHOTO FLEX (4 coats)	
Large Size—Covers approx. 5 sq. ft.	\$5.00
1 pt. PHOTO FLEX PRIMER (1 coat)	
1 qt. PHOTO FLEX (4 coats)	
Studio Size—Covers approx. 20 sq. ft.	\$15.00
2 pts. PHOTO FLEX PRIMER (1 coat)	
1 gal. PHOTO FLEX (4 coats)	

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SAFELIGHTS — Plastic

For darkroom use — complete with interchangeable filters — ruby red and dark amber.....\$2.75 each

SAFETY CANS

Size	Price Each
5 gallon	\$5.50
2 gallon	3.75
1 gallon	3.00
2 quart	2.70
1 quart	2.10

SCALES — OHAUS (See next page)

Feature 1.—Ohaus Patented Scale Plates embody many features not known in older types. These plates have the distinct advantage of easy interchangeability and replacements. They are made of white opal molded glass, the edges being highly polished and without obstructions such as clamps, screws, etc.

With the use of ordinary screw driver the replacement of a broken plate can easily be accomplished.

The threaded metal shell attached to plate is slipped over the fastener bushing of end bearing holder of scale, and, by means of two small screws, the plate is fastened permanently and rigidly to scale.

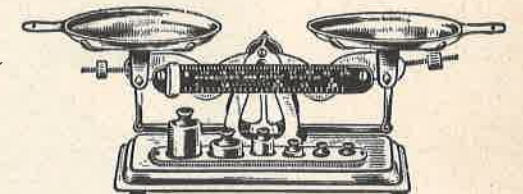
We are able to attain much greater sensitivity on scales equipped with these plates because the threaded hub is located on dead center of the plate and locates weight in exact center of yoke thus eliminating friction to toggle connections underneath the scale.

Feature 2.—Cadmium plated finish on all knife edges and working parts. Cadmium is one of the most efficient rust proof materials known. Scale parts so treated have a very high resistance to laboratory fumes and are practically immune from corrosion from this source.

Feature 3.—Specific Gravity Feature. All balances furnished are equipped with hole in base of scale for suspending on rod and tableclamp, and spindles of scale provided with small attachment hooks for rapid fastening of objects for Specific Gravity weighings.

SCALES — REXO

BALANCE, Photographic, Avoirdupois, a small, inexpensive balance of sufficient accuracy for weighing chemicals in making up solutions for photographic work or for establishing the proportions of chemicals required in general chemistry experiments. At the full capacity of approximately 4 ounces, weighings may be made with an accuracy of 1 grain.



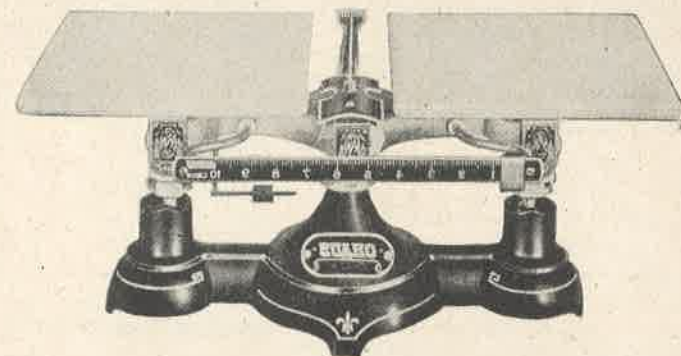
The inverted beam, carrying the removable nickel-plated pans, is provided with a double graduated scale with sliding weight for avoirdupois weighings up to 50 grains by 1 grain and for metric weighings up to 3 grams by 1/10 gram. The metal base plate is equipped with a holder for the weights, consisting of two 50 grain, and one each ¼, ½, 1, and 2 ounce weights. All parts, except the nickel-plated pans, are finished in green lacquer. Dimensions: Length, 9 inches; width, 4 inches; height, 4½ inches; diameter of pans, 3¾ inches..... Each \$6.50

BALANCE, Photographic, Metric, same as above Balance, but provided with two 10 gram and one each 2, 5, 20, and 50 gram brass weights.....Each \$5.50

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OHAUS HARVARD TRIP SCALES

SCALES — HARVARD TRIP — No. 400



This scale is designed for General Laboratory Work.

The scale is equipped with side beam of nickel silver reading up to 10 grams by 1/10 gram divisions. Graduations and figures on side beam are raised and black relief background insures clear reading and permanent wear. Upright indicator of etched nickel silver and improved balance adjustment.

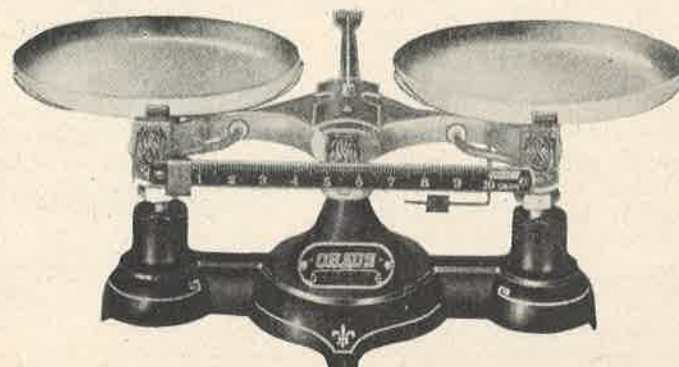
Agate bearings throughout and base black japanned finish.

All metal parts cadmium plated to resist corrosion. Scale equipped with Ohaus patent square scale plates 6" x 6" for rapid and easy replacement.

Capacity, 2 kilos.
Sensitivity, 1/10 gram.

Price Each\$13.25

SCALES — HARVARD TRIP — No. 410



There is a steady need in the Laboratory for a scale with removable pans which are more convenient for weighing material in powder form. This scale is designed to meet this requirement and the pans are of equal weight so that they may be interchanged and used on either side of the scale.

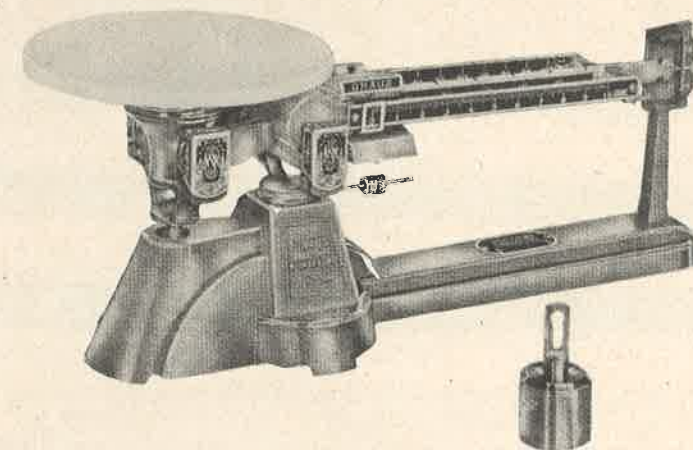
Side Beam, 10 grams x 1/10 gram.
Brass Pans, 5 1/2" diameter.
Capacity, 2 kilos.
Sensitivity, 1/10 gram.

Price Each\$15.50

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SCALES — HARVARD TRIP — No. 750G

New Triple Beam Balance with Glass Plate 6" Diameter

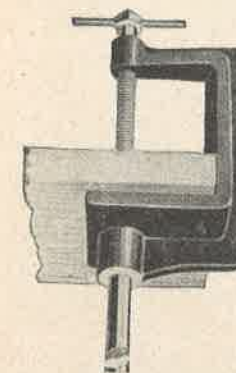


Capacity with Attachment Weights	2610 grams
Front Beam	10 grams x 1/10 gram
Center Beam	500 grams x 100 grams
Back Beam	100 grams x 10 grams
Sensitivity	1/10 gram
Shipping Weight	10 lbs.
750G Triple Beam Balance	\$14.50

New Triple Beam Balance with Avoirdupois Beams
No. 800D

Same specifications as No. 750G shown above except beams graduated in avoirdupois system.

Full Capacity	5 lbs. 2 oz.
Front Beam	1 oz. x 1/64 oz.
Center Beam	1 lb. x 1 oz.
Back Beam	1 oz. x .01 oz. or undivided tare
800D Triple Beam Balance	\$19.00 each



CLAMP AND ROD FOR HARVARD
TRIP SCALES

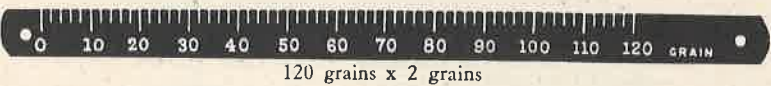
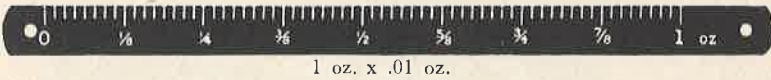
This Clamp and Rod is designed for use with Harvard Trip Scales in Specific Gravity weighing. Clamp black japanned and screw cadmium plated to resist corrosion.

No. 108 Clamp and Rod Complete\$2.30

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SPECIAL BEAMS FOR HARVARD TRIP SCALES

The scales shown on preceding pages are regularly made with metric beams. They can, however, be furnished with beams in any other standard as desired at a slight additional cost. We show below some of the more frequently used beams which can be attached to these balances.



In addition to the above we can furnish Double Beam Scales using any of these beams as shown and adding a lower beam to suit the requirements of the user.
Prices for any of these modifications will be furnished promptly on receipt of detailed specifications.

SCOTCH TAPES — See Tapes

SEAMLESS TUBINGS — ROBPORT

The Seamless Flannel Tubings listed below are exclusive with Roberts & Porter, and are manufactured from pure virgin wool. Being seamless, they possess the distinct advantage of making a more uniform roller. They are easier to apply than sewn flannels, and assure a snug-fitting cover, due to the fact that when they are stretched longitudinally they will tighten on their own axis.

Material	Size Flat	Less than Roll	Roll Lot
#60 Cotton	3 1/2" - 4" - 4 1/2"	.25 ft.	.20 ft.
#61 Cotton	2 1/2" - 3"	.25 ft.	.20 ft.
#63 Cotton (heavy)	4"	.29 ft.	.24 ft.
#64-N Flannel	2 5/8"	.44 ft.	.39 ft.
#64 Flannel	3"	.44 ft.	.39 ft.
#65 Flannel	3 1/2"	.48 ft.	.43 ft.
#66 Flannel	4"	.52 ft.	.47 ft.

See Page 131 for further details regarding above seamless tubings.

SEWING CORDS

Barbour's Linen — 4, 5 & 6 Cord	\$3.70 lb.
Hayes Linen — 3 & 4 Cord	5.10 lb.
	2.55 1/2lb.
FFF Silk Thread	1.25 spool
#36 Blocking Cord	1.15 lb.
#175 End Cord	2.45 lb.
	1.25 1/2lb.

SNAKESLIPS — See Correction Slips

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SPONGES — Cellulose (Fine Grain)

#10 — 4 3/8" x 6 1/2" x 2 1/2"	\$1.50 each
#8 — 3 7/8" x 6 1/4" x 2"	1.00 each
#6 — 3 1/2" x 5 1/4" x 1 5/8"	.60 each
#4 — 3 1/8" x 4 3/8" x 1 1/4"	.35 each

SPONGES — Natural Sheepswool

We carry a quality line of natural sheepswool sponges. Because of the current price fluctuations in the sponge market, prices are not listed, but will be quoted upon request.

SQUEEGEES — Rubber

8"	\$1.10 each
10"	1.60 each
12"	1.85 each
15"	2.15 each

STIRRING RODS — Glass

8"	\$.08 each
10"	.10 each
12"	.12 each
15"	.20 each
18"	.25 each

STRAIGHT EDGES — Stocked when available

"T" SQUARES — Stocked when available

TAPES — MINNESOTA MINING CO.

Scotch Cellulose

2592 INCH ROLLS	SIZE	PACKING		LIST PRICE	NET PRICE TO ALL CONSUMERS (Incl. city, county, state depts. & schools)			
		Per Can	Per Carton		1 Roll Net	6 Rolls @ 10% Discount	48 Rolls @ 20% Discount	144 Rolls @ 30% Discount
Transparent	1/4 x 2592 in.	4	12	\$0.82	\$0.82	\$0.74	\$0.66	\$0.58
Transparent	3/8 x 2592 in.	3	12	.95	.95	.86	.76	.67
Transparent	1/2 x 2592 in.	2	12	1.08	1.08	.98	.87	.76
Transparent	5/8 x 2592 in.	2	12	1.23	1.23	1.11	.99	.87
Transparent	3/4 x 2592 in.	1	12	1.35	1.35	1.22	1.08	.95
Transparent	1 x 2592 in.	1	12	1.76	1.76	1.59	1.41	1.24
Standard Colors*	1/4 x 2592 in.	4	12	.91	.91	.82	.73	.64
Standard Colors	3/8 x 2592 in.	3	12	1.06	1.06	.96	.85	.75
Standard Colors	1/2 x 2592 in.	2	12	1.20	1.20	1.08	.96	.84
Standard Colors	5/8 x 2592 in.	2	12	1.36	1.36	1.23	1.09	.96
Standard Colors	3/4 x 2592 in.	1	12	1.50	1.50	1.35	1.20	1.05
Standard Colors	1 x 2592 in.	1	12	1.96	1.96	1.77	1.57	1.38
Edging Tape—White	3/8 x 2592 in.	3	12	1.06	1.06	.96	.85	.75
Edging Tape—White	1/2 x 2592 in.	2	12	1.20	1.20	1.08	.96	.84

*STANDARD COLORS FOR 2592 IN. ROLLS—Red, Green, Blue, Black, White, Brown, Orange-Yellow, Purple, Deep Orange and Silver.

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

TAPES — MINNESOTA MINING CO.

Scotch Drafting (Brown Paper Backing)

Scotch Photographic (Black Paper Backing)

60-YARD ROLLS	SIZE	PACKING		LIST PRICE	NET PRICE TO ALL CONSUMERS (Incl. city, county, state depts. & schools)			
		Per Box	Per Cart.		1 Roll — Net	12 Rolls @ 10% Discount	36 Rolls @ 15% Discount	144 Rolls @ 23% Discount
"SCOTCH" Drafting Tape	1" x 60 yd.	1	12	\$1.12	\$1.12	\$1.01	\$0.96	\$0.87
"SCOTCH" Photographic Tape	1/2" x 60 yd.	1	12	.75	.75	.68	.64	.58
"SCOTCH" Photographic Tape	1" x 60 yd.	1	12	1.16	1.16	1.05	.99	.90

SCOTCH MASKING

60-YARD ROLLS	LIST PRICE PER ROLL	NET PRICES PER ROLL TO CONSUMERS			
		1 Roll Net	12 Rolls @ 10% Discount	36 Rolls @ 15% Discount	144 Rolls @ 23% Discount
1/4 inch x 60 yards	\$0.56	\$0.56	\$0.51	\$0.48	\$0.44
1/2 inch x 60 yards	.72	.72	.65	.62	.56
3/4 inch x 60 yards	.90	.90	.81	.77	.70
7/8 inch x 60 yards	1.01	1.01	.91	.86	.78
1 inch x 60 yards	1.12	1.12	1.01	.96	.87
1 1/4 inches x 60 yards	1.40	1.40	1.26	1.19	1.08
1 1/2 inches x 60 yards	1.68	1.68	1.52	1.43	1.30
2 inches x 60 yards	2.24	2.24	2.02	1.91	1.73

TAPE DISPENSERS

Heavy Duty.....1.95 each

THERMOMETERS — TRAY

Stainless Steel 0°-140° F. with clip......85 each

THICKNESS MEASURE #25 — ROBPORT

The ROBPORT Thickness Measure No. 25 is the smallest, lowest priced, most accurate, durable and popular dial pocket gauge that has ever been made. Its case thickness is only 1/4" and dial diameter 1 1/2", yet measurements up to 1/16" can be made with great accuracy.

The method of lifting its spindle and upper anvil is patented and accounts for the compactness of the Thickness Measure. The finger is simply drawn back slightly to open the anvils 1/16" and lifted to permit them to close under spring pressure. The spindle has three grooves cut in it to indicate complete turns of the hand around the dial which is graduated in thousandths of the inch. One turn of the hand is made as the anvils open 1/10". Fractions and their decimal equivalents are stamped on the back. The case is polished, chrome plated and rustless. Weight 3 ounces.



Price including case.....\$12.00 each

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

TIMERS

Anso Split Second Timer.....	\$6.25 each
G. E. Interval Timer (15 seconds to 2 hrs.).....	7.50 each
Eastern Minute Timer.....	4.45 each

TRAYS — PHOTO DEVELOPING (3" deep)

White Enamelled CESCO	Film Size	Price Each
	5 x 7	\$.70
	8 x 10	1.05
	10 x 12	1.40
	11 x 14	1.85
	14 x 17	3.05
	16 x 20	4.05
	18 x 22	8.25
	20 x 24	9.45
	23 x 28	11.50

Hard Rubber ACE	Film Size	Price Each
	5 x 7	\$.60
	8 x 10 .....	.90
	11 x 14	2.20
	14 x 17	3.60
	18 x 22	8.40
	20 x 24	9.60

18-8 Stainless Steel LEEDAL	Film Size	Price Each
	14 x 17	\$18.00
	20 x 24	22.00
	22 x 28	25.00
	30 x 40	39.50

Above trays are non-corrosive, and cannot break, chip or develop cracks. Made of 18-8 Stainless Steel of heavy gauge — double seamed and soldered on outside, with heavy wire around top. Special sizes made to order.

TRAYS — PHOTO FIXING (6" deep)

White Enamelled CESCO	Size	Price Each
	20 x 30	\$18.15

18-8 Stainless Steel LEEDAL	Size	Price Each
	16 x 19	\$20.50
	22 x 26	28.00
	24 x 30	35.50
	32 x 42	49.00

Above trays are non-corrosive, and cannot break, chip or develop cracks. Made of 18-8 Stainless Steel of heavy gauge — double seamed and soldered on outside, with heavy wire around top. Special sizes made to order.

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

TRIMMING BOARDS — BRADLEY

Ruled in squares and has auto-lift handle. Used for cutting both film and paper.

Model	Size	Price Each
Dandy	8"	\$ 4.50
Studio	10"	5.75
Monarch	12"	8.00
Popular	15"	14.00
National	18"	21.00
Springfield	24"	34.50

WATER ROLLER COVERING — SEAMLESS

#92 — 4" diameter — very light duck.....	\$.85 per yd.
#92H — 4" diameter — heavy 8 oz. duck.....	.85 per yd.
#93 — 3" diameter — linen.....	.85 per yd.
#93 — 3½" diameter — linen.....	.85 per yd.
#93 — 4" diameter — linen.....	.85 per yd.

#92-4", #92H-4", and #93-4" are for use on the following Harris Presses:

S4L	36" long
S5L—S6L—EL	40" long
S8L—LSC	52" long
S7L	56" long
LB—JT—GT—LSW—LSX	62" long
LSK	66" long
LSG—LT	72" long

#93-3½" is used on the following Harris Presses:

LSB	30" long
LSN	36" long

#93-3" is used on the Harris LTG and LTE.....30" long

The above seamless water roller coverings can also be used for makes of presses other than Harris. Samples of the various sizes will be sent upon request.

WATER ROLLER COVERING — SEWN

Water roller covers can be sewn to any specified size, and in the following materials: light duck, heavy 8 oz. duck or linen. Please give circumference or diameter of water pan roller. Prices furnished upon request.

Over Fifty Years of Service to the Graphic Arts

Chemicals

CHEMICALS

HARRIS LITHO CHEMICALS

HARRIS DEEP ETCH PROCESS

Harris Deep Etch coatings hold the etch, lacquer and developing ink to the true shape of the finest line or halftone dot.

Deep etch allows more tone control by permitting dot etching and image alteration on the positive transparency. Maximum halftone scale and interesting highlights are the result.

Deep etch holds ink within bounds and retards fuzzy spreading action. This eliminates the need for strong fountain etches that tend to wash out the depth of color on the paper.

Deep etch allows the pressman to carry more ink for crisp, dense blacks and color.

Deep etch images stay sharp on the press for a longer time because they are protected against blanket and roller friction.

Hidensity Deep Etch Coating
(Code No. DE-1)

For accurate reproduction.

1	1-Gal.....	\$5.25 per gal.
6	1-Gal.....	5.00 per gal.
12	1-Gal.....	4.75 per gal.

Higravity Deep Etch Coating
(Code No. DE-10)

For average use—easily handled—coats smoothly.

1	1-Gal.....	\$4.50 per gal.
6	1-Gal.....	4.00 per gal.
1	5-gal. Carboy*	3.50 per gal.

Deep Etch Developer No. 1
(Code No. DE-3)

For use with Hidensity Coating. Odorless and non-injurious to the skin—does not form insoluble compounds with the dissolved coating or plate metal.

1	1-Gal. Bottle.....	\$3.50 per gal.
4	1-Gal. Bottles (1 Case).....	3.25 per gal.
8	1-Gal. Bottles (2 Cases).....	3.00 per gal.

Deep Etch Developer No. 2
(Code No. DE-13)

For use with Higravity Coating. Has the same properties as Developer No. 1 but is more active.

1	1-Gal. Bottle.....	\$3.50 per gal.
4	1-Gal. Bottles (1 Case).....	3.25 per gal.
8	1-Gal. Bottles (2 Cases).....	3.00 per gal.

Deep Etch Aluminum Etch
(Code No. DE-6)

Permits uniform etching and does not burn the plate.

1	1-Gal. Bottle.....	\$3.50 per gal.
4	1-Gal. Bottles (1 Case).....	3.25 per gal.
8	1-Gal. Bottles (2 Cases).....	3.00 per gal.

Deep Etch Zinc Etch
(Code No. DE-5)

Has a sufficiently long etching time to enable the operator to evenly etch the largest size plate—does not leave a crystalline deposit.

1	1-Gal. Bottle.....	\$3.50 per gal.
4	1-Gal. Bottles (1 Case).....	3.25 per gal.
8	1-Gal. Bottles (2 Cases).....	3.00 per gal.

*NOTE — A charge of \$4.00 will be made for each 5-gallon carboy. Full credit will be allowed when the carboy is returned — transportation prepaid — directly to the Harris-Seybold Company in Cleveland.

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

HARRIS LITHO CHEMICALS — (Continued)

Anhydrous Plate Wash (Code No. PW-1)

For cleaning the plate after developing and etching.

PRICE SUBJECT TO MARKET CONDITIONS

1	5-Gal. Can.....	per gal.
1	55-Gal. Drum.....	per gal.

Stop Out Solution (Code No. DE-4)

For removing those portions of the image which are not wanted. Spreads easily, dries rapidly, and is very resistant to developing and etching solutions.

1	8-Oz. Bottle.....	\$1.50 each
4	8-Oz. Bottles.....	1.40 each
12	8-Oz. Bottles (1 Case).....	1.30 each

Cleansing Paper (Code No. CP-1)

PRICE SUBJECT TO MARKET CONDITIONS

Per Pound.....

Litho Asphaltum (Code No. A-1)

For description and price, see surface plate chemicals.

Deep Etch Lacquer (Code No. DE-7)

Easily applied—has an extremely long life—highly acid resistant—exceptionally receptive to ink—is self-leveling—does not flake off in storage.

1	1-Qt. Bottle.....	\$6.50 per quart
4	1-Qt. Bottles.....	6.25 per quart
12	1-Qt. Bottles (1 Case).....	6.00 per quart

Deep Etch Developing Ink (Code No. DE-8)

Gives a jet-black, waterproof, acid-proof image. Packed in handy, one-pound tubes.

1	1-Lb. Tube.....	\$2.10 per pound
5	1-Lb. Tubes.....	2.00 per pound
10	1-Lb. Tubes (1 Case).....	1.90 per pound

Plate Cleaning Solution (Code No. DE-9)

For use in removing the unhardened resist from deep etch plates. In low concentration it does not harm the plate or weaken the image.

1	1-Qt. Bottle.....	\$1.90 per quart
4	1-Qt. Bottles.....	1.80 per quart
12	1-Qt. Bottles (1 Case).....	1.70 per quart

Deep Etch Swabs (Code No. DE-S)

For applying Deep Etch Developers and Etches..... \$1.40 each

INITIAL ORDER

For those who have never tried the Harris Deep Etch Process we suggest the following initial order:

- 1 Gal. Hidensity Deep Etch Coating
- 1 Gal. Deep Etch Developer No. 1

OR

- 1 Gal. Higravity Deep Etch Coating
- 1 Gal. Deep Etch Developer No. 2
- 1 Gal. Etch (Specify Zinc or Aluminum)
- 8 Oz. Stop Out Solution
- 1 Lb. Deep Etch Developing Ink
- 1 Qt. Deep Etch Lacquer
- 1 Qt. Counter Etch
- 1 Qt. Litho Asphaltum
- 1 Qt. Plate Cleaning Solution
- 2 Deep Etch Swabs
- 5 Gal. Anhydrous Plate Wash
- 10 Lbs. Cellulose Paper
- 5 Lbs. Hydrogum
- 1 Gal. Hydro Etch

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

HARRIS LITHO CHEMICALS — (Continued)

SURFACE PLATE CHEMICALS

V-Coat Platemaking Solution (Code No. SP-2)

An economical concentrated plate coating for surface plates—gives clean, sharp images—non-spoiling.

1	1-Qt. Bottle.....	\$1.25 per quart
1	1-Gal. Bottle.....	3.75 per gal.
4	1-Gal. Bottles (1 Case).....	3.50 per gal.
8	1-Gal. Bottles (2 Cases).....	3.25 per gal.

V-Etch (Code No. SP-4)

A chemically correct pre-etch—accurately compounded crystals packaged in wax-sealed containers. Contains no ammonium Dichromate to irritate skin. One package makes 64 ounces.

1	64-Oz. Size Package.....	\$1.15 each
12	64-Oz. Size Packages.....	1.10 each
96	64-Oz. Size Packages.....	1.00 each

Surface Plate Developing Ink (Code No. SP-3)

Spreads easily—develops clean—good acid resistance—gives clear, black images.

1	1-Qt.....	\$4.00 per quart
4	1-Qt.....	3.75 per quart
12	1-Qt.....	3.50 per quart

AN IMPROVED FOUNTAIN ETCH

Hydro Etch (Code No. HE-1)

Keeps the plate clean without injury to plate or image—chemically constructed so that pH cannot reach damaging strength—does not deaden press ink—resists roller stripping.

1	64-Oz. Size Package.....	\$1.80 each
12	64-Oz. Size Packages.....	1.70 each
96	64-Oz. Size Packages.....	1.60 each

Litho Asphaltum (Code No. A-1)

Resistant to the solvents used in press inks, thereby protecting the image—makes the images highly ink receptive—repels the action of the fountain etch.

1	1-Qt.....	\$1.50 per quart
1	1-Gal.....	4.25 per gallon
1	5-Gal. Can.....	3.90 per gallon
2	5-Gal. Cans.....	3.80 per gallon

Counter Etch (Code CE-2)

Widely used for all types of plates—effectively removes chemical salts from the grain of the plate—does not damage the grain of the plate—one quart makes 32 to 64 gallons.

1	1-Qt. Bottle.....	\$5.00 per quart
4	1-Qt. Bottles.....	4.75 per quart
12	1-Qt. Bottles.....	4.50 per quart

Hydrogum (Code No. G-1)

For gumming up and protecting plates—prevents gum streaks—non-spoiling—makes a superior fountain solution for use with Hydro Etch—saves dampening roller life.

5-Lb.	Canister.....	\$0.68 per pound
25-Lb.	Drum.....	.61 per pound
100-Lb.	Drum.....	.59 per pound

(See HYDROGUM — Liquid)
Page 62

1	1-Gal. Size Package.....	\$3.20 each
6	1-Gal. Size Packages.....	3.05 each
48	1-Gal. Size Packages.....	2.95 each

For those who have never tried V-Coat we suggest the following initial order:

- 1 Qt. V-Coat
- 1 Pkg. V-Etch
- 1 Qt. Surface Plate Developing Ink
- 1 Qt. Litho Asphaltum
- 5 Lbs. Hydrogum

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

CHEMICALS

	Container	Amount	Per
ACETIC ACID — 99½%..... (Glacial U.S.P.)	8 lb. jug 5 lb. bot.	\$.38 .39	Lb. Lb.
ACETONE — U.S.P.....	30 lb. drum 7 lb. jug 1 lb. bot.	— .29 .48	Lb. Lb. Lb.
ALBUMEN EGG — SCALES..... (Mallinckrodt)	100 lb. drum 25 lb. drum 5 lb. carton	Market Prices	
ALCOHOL — ANHYDROUS..... (200 proof)	55 gal. drum 5 gal. can	Market Prices	
AMMONIA WATER — C.P. 28%.....	4 lb. bot.	.33	Lb.
AMMONIUM ALUM — U.S.P..... (Powdered)	25 lb. drum 5 lb. bot.	.21 .25	Lb. Lb.
AMMONIUM DICHROMATE..... (Photo Granular)	100 lb. drum 25 lb. drum 5 lb. bot.	.67 .75 .80	Lb. Lb. Lb.
AMMONIUM HYDROXIDE..... (See Ammonia Water)	1 lb. bot.	.90	Lb.
AMMONIUM NITRATE..... (Granular)	25 lb. drum 5 lb. bot.	.25 .44	Lb. Lb.
AMMONIUM THIOCYANATE A.R.....	1 lb. bot. 5 lb. bot.	.53 2.25	Lb. Lb.
AMMONIUM THIOSULFATE..... (Purified — Photo)	1 lb. bot. 5 lb. bot. 1 lb. bot.	2.30 .69 .75	Lb. Lb. Lb.
AMYL ACETATE A.R.....	5 lb. bot.	.99	Lb.
ASPHALTUM — LITHO..... (Harris)	1 lb. bot. 2 x 5 gal. drums 5 gal. drum 1 gal. can	1.04 3.80 3.90 4.25	Lb. Gal. Gal. Gal.
BEE SWAX.....	1 qt. bot. 1 lb. pkg.	1.50 1.00	Qt. Lb.
BLANKET RENEWER ROBPORT (Stanton) 1 case.....	1 gal. 4 gals.	3.60 3.10	Gal. Gal.
This product was developed to replace usual pumice and hydroquinone mixtures used to remove glaze from the press blanket and restore tack to the blanket surface.			
Soak a CLEAN white rag with BLANKET RENEWER and rub briskly, in a circular motion, until all ink stains are removed and the blanket presents an even uniform color. Do not miss any areas as the missed portion may not take ink during the press run and may cause a variation in the finished job.			
We suggest to all pressmen that they overlap areas being washed so that no spots remain untreated.			
CAUTION: Whenever solvents are used, the operator should ALWAYS rinse his hands in clear water to remove any irritating effects.			
BORAX — Photo Granular.....	5 lb. bot. 1 lb. bot.	.27 .30	Lb. Lb.
BORIC ACID (Boracic Acid)..... (Photo)	100 drum 25 lb. drum 5 lb. bot. 1 lb. bot.	.20 .24 .27 .32	Lb. Lb. Lb. Lb.

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

CHEMICALS — (Continued)

	Container	Amount	Per
CARBOLIC ACID — U.S.P..... (Liquefied Phenol).....	5 lb. bot. 1 lb. bot.	\$.46 .55	Lb. Lb.
CARBON DISULPHIDE..... (Purified)	10 lb. can 5 lb. can	.26 .28	Lb. Lb.
CARBON TETRACHLORIDE..... (Purified)	1 gal. bot.	1.85	Gal.
CHROMIC ACID..... (Tech'l. 99¾%)	5 lb. bot. 1 lb. bot.	.72 .95	Lb. Lb.
CITRIC ACID — U.S.P..... (Granular)	100 lb. drum 25 lb. drum 5 lb. bot.	.27 .30 .43	Lb. Lb. Lb.
CORROSIVE SUBLIMATE..... (See Mercury Bichloride)			
COUNTER ETCH..... (See Harris Litho Chemicals)			
CREAM OF TARTAR — U.S.P..... (Powdered)	50 lb. drum 25 lb. drum 5 lb. bot. 1 lb. bot.	.51 .52 .65 .67	Lb. Lb. Lb. Lb.
DAMPENER ROLLER CLEANER — ROBPORT	½ gal. 1 gal. 1 case (4 gals.)	1.50 2.50 2.25	Gal. Gal. Gal.
This product was developed to give the operator a solution that would emulsify imbedded ink more rapidly and also bleach the dirty cover by removing the stains it has accumulated.			
For quick cleaning of the dampener roller, pour solution directly on the roller and scrub with a stiff brush. Let the CLEANER do the work; it works fast and only a very light scraping will be necessary to loosen any stubborn ink. Rinse the roller very thoroughly before replacing in press.			
For use in automatic machines make a dilution of 8 ounces of CLEANER to each gallon of hot water. Run dampeners in machine until clean and then rinse very thoroughly.			
Warm to hot water helps to speed up the cleaner and assists in softening the hardened ink.			
DEEP ETCH PROCESS..... (See Harris Litho Chemicals — Page 57)			
DEVELOPERS — PHOTO..... (See Film Developers)			
DEVELOPING INK — LITHO.....	12 qts. 4 qts. 1 qt.	3.50 3.75 4.00	Qt. Qt. Qt.
Harris Surface Plate Developing Ink Robport Developing Ink			
EGG ALBUMEN..... (See Albumen Egg — Scales)			
ETHER — U.S.P.....	5 lb. can 1 lb. can	.59 .74	Lb. Lb.

Over Fifty Years of Service to the Graphic Arts

CHEMICALS—(Continued)

	Container	Amount	Per
FILM DEVELOPERS			
Ansco Paralith.....	1 gal. size.	.70	Ea.
	36 x 1 gal. size	.60	Ea.
Ansco Reprolith.....	1 gal. size	1.00	Ea.
	36 x 1 gal. size	.85	Ea.
FILM FIXING BATH (See Foto-Fix)			
FLEXOGLOSS — ANSCO.....	1 gal. bot.	3.00	Ea.
	1 qt. bot.	1.00	Ea.
	8 oz. bot.	.45	Ea.
FORMALDEHYDE SOLUTION.....	5 lb. bot.	.35	Lb.
U.S.P.	1 lb. bot.	.44	Lb.
FOTO-FIX (Concentrated Liquid Fixing Bath).....	4 x 1 gal. bot.	3.00	Gal.
	1 gal. bot.	3.50	Gal.
FOUNTAIN SOLUTION — HYDRO ETCH (See Harris Litho Chemicals — Page 59)			
FRENCH CHALK.....	25 lb. drum	.12	Lb.
(Talcum)	5 lb. bot.	.15	Lb.
GALLIC ACID — Technical.....	5 lb. carton	1.86	Lb.
	1 lb. bot.	1.89	Lb.
GLUE — ENGRAVER'S.....	12 x 1 qt. bot.	2.50	Qt.
(LePage's)	6 x 1 qt. bot.	2.75	Qt.
	1 qt. bot.	3.00	Qt.
GLYCERINE — C.P.....	5 lb. bot.	Market Prices	
	1 lb. bot.	Market Prices	
GROUNDGLASS SOLUTION — Ansco.....	4 oz. bot.	.60	Bot.
GUM ARABIC — Fine Grains.....	100 lb. drum	.29	Lb.
	25 lb. drum	.32	Lb.
HAND CLEANER (See Speed Soap)	5 lb. bot.	.36	Lb.
HYDROCHLORIC ACID — C.P.....	6 lb. bot.	\$.23	Lb.
(Muriatic)	1 lb. bot.	.49	Lb.

HYDROGUM — LIQUID

An improved version of the well-known Harris Hydrogum. This gum is blended in glass-lined tanks equipped with heavy duty mixing motors, in order to assure an even mixture and a close Baume.

Liquid Hydrogum removes the question of variable Baume, is always handy to the pressman or platemaker, and saves the labor involved in mixing regular gum arabic or powdered Hydrogum.

Delivered in single gallons — five gallon carboys — and fifty-five gallon plastic-lined steel drums.

Container	Amount	Per
55 gal. drum	\$1.55*	Gal.
2 x 5 gal. carboy	1.65*	Gal.
5 gal. carboy	1.80*	Gal.
12 x 1 gal. bot.	1.85	Gal.
4 x 1 gal. bot.	2.00	Gal.
1 gal. bot.	2.25	Gal.
*carboy and drum charge	4.00	

Over Fifty Years of Service to the Graphic Arts

	Container	Amount	Per
HYDROQUINONE.....	100 lb. drum	1.20	Lb.
	25 lb. drum	1.24	Lb.
	5 lb. bot.	1.31	Lb.

HYPO FIXING BATH — Liquid
(See Foto-Fix)

INK COMPOUNDS AND DRIERS

Beccard's Combined Ink Regulator and Drier

Beccard's Combined Ink Regulator and Drier is a neutral drier that eliminates crystallization, making inks trap when one color is printed over another; improves distribution of inks, making them lay smooth and even on solids; gives ink good lifting properties, producing sharp clean impressions when fine screen half-tones are used; eliminates smudgy, smeary appearance; makes inks set rapidly, diminishing offset; eliminates ink piling or caking up on plates, rollers and rubber blankets; increases covering capacity; prevents inks sticking or sweating; prevents sticking when used in overprint varnish; prevents picking; produces rub-resistance and water resistance; Beccard's does all this without darkening or weakening the color of the inks . . . and can be used with all kinds and classes of inks, both litho-offset and letterpress, and with all kinds of paper.

	Amount	Per
2 lb. can	\$1.35	Lb.
5 to 50 lbs.	1.10	Lb.
50 to 100 lbs.	.95	Lb.
100 lbs. and over	.85	Lb.

C-44 MERCURY COMPOUND

C-44 Mercury Compound is an all around reducer which requires a very small amount to break up any tack and does not tend to grease the press plate. It assists in helping the color to lay well — it is especially good for label work where cheap paper causes linting. It does not retard or affect drying and has an ingredient giving a little etching quality. It keeps lettering open and makes color lay smoother.

	Amount	Per
1 to 25 lbs.	\$.95	Lb.
25 to 100 lbs.	.85	Lb.
100 lbs. and over	.80	Lb.

MONROE DRIER

Monroe Drier is a compounded two-way Drier, possessing the good features of both COBALT and PASTE Driers, drying the ink from the bottom up as with Cobalt, and from the top down as with Paste Driers. Causes no chemical or physical reaction to Rollers, Press Plates, or Blankets, and can be used in both Black and Colored Inks. It is highly recommended for label work, when bronzing is to follow. When used in the inks it definitely prevents Bronze from sticking to the printed surface. Monroe Drier will not change the consistency of the inks.

	Amount	Per
(1 lb. cans)		
1 to 24 lbs. incl.	\$1.20	Lb.
25 to 49 lbs. incl.	1.10	Lb.
50 lbs. and over	.90	Lb.
(5 lb. cans)		
1 to 24 lbs. incl.	1.15	Lb.
25 to 49 lbs. incl.	1.05	Lb.
50 lbs. and over	.85	Lb.

Over Fifty Years of Service to the Graphic Arts

SURESET COMPOUND

Sureset Compound is a paste reducer for use in litho and letterpress inks, and when used in conjunction with Monroe Drier makes an ideal combination of Reducer and Drier, leaving an unusually receptive surface for "trapping" subsequent printings. Sureset Compound reduces the ink without thinning it, thereby preventing "creeping" of ink and "greasing" the printed sheet or unprinted areas. It also prevents considerable offset, mottling, and picking.

Sureset Compound saves ink because it affords such complete control of ink distribution that solids are covered with a minimum flow of ink.

Sureset Compound saves press blankets, as practically all ink is taken from the blanket with each impression, so that blankets are not embossed with an accumulation of ink.

Sureset Compound saves rollers and plates, as distribution control prevents the wear due to an excess amount and accumulation of ink. It also prevents the filling-in of fine screens and "highlights."

	Amount	Per
(2½ lb. cans)		
2½ lbs.	\$1.20	Lb.
5 to 20 lbs.	1.05	Lb.
25 lbs.	1.00	Lb.
50 lbs.	.95	Lb.
100 lbs.	.90	Lb.
(5 lb. cans)		
5 to 20 lbs.	.95	Lb.
25 to 45 lbs.	.90	Lb.
50 to 100 lbs.	.85	Lb.
100 lbs. and over	.80	Lb.

	Container	Amount	Per
INK ROLLER GLAZE REMOVER	1 pint	\$1.00	Pt.
(Robport)	1 qt.	1.50	Qt.
	½ gal.	2.60	½ Gal.
	1 gal.	5.00	Gal.
	2 gals. or more	4.50	Gal.

This product was developed to eliminate the lye bath operation generally used on ink rollers that have become badly glazed.

When used the first time, it may be necessary to wash these rollers two to three times to remove the heavy accumulation of ink or varnish. The press should be washed up in the usual manner, to remove excess ink, and then introduce a sufficient amount of ROBPORT ROLLER GLAZE REMOVER to thoroughly moisten all press rollers. Allow press to operate for a few minutes and then rewash the press with usual solvent.

It is recommended that this procedure be used once a week. Regular use will eliminate the necessity for removing rollers for lye bathing and will keep the rollers in perfect condition.

Should the run be complete and it is impractical to wash the press up at once, remove ink from fountain and run in ROBPORT ROLLER GLAZE REMOVER until rollers are moist. This will keep the ink soft for several hours and allow washup to be made in normal fashion.

INTENSOL — ROBPORT	5 gal. carboy*	\$3.75	Gal.
(Wetting Agent)	1 gal. bot.	4.00	Gal.
	*carboy charge	\$6.00	

Over Fifty Years of Service to the Graphic Arts

CHEMICALS — (Continued)

	Container	Amount	Per
IODINE — U.S.P.	5 lb. bot.	\$2.86	Lb.
(Resublimed Crystals)	1 lb. bot.	3.12	Lb.
IRON & AMMONIUM CITRATE — U.S.P.	5 lb. bot.	Market Prices	
(Brown or Green Scales)	1 lb. bot.	Market Prices	
IRON SULFATE — U.S.P.	25 lb. drum	.16	Lb.
(Crystals)	5 lb. bot.	.33	Lb.
LACQUER INTENSIFIER	1 qt. bot.	2.25	Qt.
(Robport Plate Help)			
LACTIC ACID — U.S.P. 85%	5 lb. bot.	1.00	Lb.
	1 lb. bot.	1.09	Lb.
LENS & SCREEN CLEANER	12 oz. bot.	1.25	Bot.
MAGNESIUM CARBONATE — U.S.P.	5 lb. carton	.38	Lb.
(Powdered)	1 lb. carton	.42	Lb.
MAGNESIUM NITRATE — A.R.	5 lb. bot.	.79	Lb.
	1 lb. bot.	.85	Lb.
MERCURY BICHLORIDE — U.S.P.	25 lb. drum	2.06	Lb.
(Corrosive Sublimate)	5 lb. bot.	2.48	Lb.
	1 lb. bot.	2.57	Lb.
NITRIC ACID — C.P.	7 lb. bot.	.28	Lb.
	1 lb. bot.	.55	Lb.
OLEIC ACID — U.S.P.	5 lb. bot.	.66	Lb.
	1 lb. bot.	.75	Lb.
OPAQUE			
Asco — Red	18 oz. jar	2.25	Jar
	9 oz. jar	1.25	Jar
	2½ oz. jar	.50	Jar
Barlow — Black	12 x 6 oz. jars	3.50	Jar
	6 oz. jar	3.75	Jar
	12 x 2 oz. jar	1.20	Jar
	2 oz. jar	1.25	Jar
PARAFORMALDEHYDE	5 lb. bot.	.55	Lb.
(Photo)	1 lb. bot.	.63	Lb.
PARALITH DEVELOPER — Ansco			
(See Film Developers)			
PHOSPHORIC ACID — U.S.P.	7 lb. bot.	.39	Lb.
(85% — Syrupy)	1 lb. bot.	.62	Lb.
PICTOL	5 lb. bot.	3.51	Lb.
(Identical with Metol)	1 lb. bot.	3.58	Lb.
	½ lb. bot.	3.72	Lb.
PLATE COATING SOLUTIONS			
(See Harris Litho Chemicals)			
PLATE ETCHES			
(See Harris Litho Chemicals — Pages 57-59)			

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

CHEMICALS—(Continued)

	Container	Amount	Per
PLATE HELP — ROBPORT (Lacquer Intensifier and Plate Base)	1 qt. bot.	2.25	Qt.
POTASSIUM ALUM — Photo	100 lb. drum	\$.12	Lb.
	25 lb. drum	.17	Lb.
	5 lb. carton	.20	Lb.
	1 lb. carton	.23	Lb.
POTASSIUM ALUM CHROME (Photo — Granular)	25 lb. drum	.28	Lb.
	5 lb. bot.	.31	Lb.
	1 lb. bot.	.35	Lb.
POTASSIUM BROMIDE — U.S.P.	100 lb. drum	.30	Lb.
	25 lb. drum	.33	Lb.
	5 lb. bot.	.48	Lb.
	1 lb. bot.	.51	Lb.
POTASSIUM CARBONATE — U.S.P.	5 lb. carton	.40	Lb.
	1 lb. bot.	.44	Lb.
POTASSIUM DICHROMATE (Granular)	25 lb. drum	.34	Lb.
	5 lb. bot.	.38	Lb.
	1 lb. bot.	.42	Lb.
POTASSIUM FERRICYANIDE (Red Prussiate — Crystals)	25 lb. drum	1.00	Lb.
	5 lb. bot.	1.25	Lb.
	1 lb. bot.	1.33	Lb.
POTASSIUM FERROCYANIDE (Yellow Prussiate — Crystals)	5 lb. carton	.49	Lb.
	1 lb. carton	.53	Lb.
POTASSIUM IODIDE — U.S.P.	25 lb. drum	2.05	Lb.
	5 lb. bot.	2.39	Lb.
	1 lb. bot.	2.44	Lb.
POTASSIUM META-BISULFITE (Granular)	25 lb. drum	.41	Lb.
	5 lb. bot.	.46	Lb.
	1 lb. bot.	.51	Lb.
POTASSIUM NITRATE — U.S.P.	5 lb. bot.	.39	Lb.
	1 lb. bot.	.43	Lb.
POTASSIUM PERMANGANATE (U.S.P. — Crystals)	5 lb. bot.	.49	Lb.
	1 lb. bot.	.59	Lb.
PUMICE POWDER — FFF	25 lbs.	.10	Lb.
	5 lbs.	.15	Lb.
PYROGALLIC ACID (Photo — Crystals)	5 lb. can	3.88	Lb.
	1 lb. bot.	3.99	Lb.
REPROLITH DEVELOPER — Ansco (See Film Developers)			
ROSIN — Powdered	1 lb. pkg.	.39	Lb.
RUBBER CEMENT — ASCO (Made from crude rubber)	1 gal. can	4.00	Gal.
	1 qt. can	1.25	Qt.
	1 pt. can	.70	Pt.
	3 oz. tube	.25	Ea.
SILVER NITRATE — C.P. (Crystals)	250 oz. bot.		
	100 oz. bot.	Market Prices	
	50 oz. bot.		
	16 oz. bot.		
SODIUM CARBONATE — Photo (Monohydrated)	25 lb. drum	.11	Lb.
	5 lb. bot.	.14	Lb.

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

CHEMICALS—(Continued)

	Container	Amount	Per
SODIUM DICHROMATE (Granular)	5 lb. bot.	\$.39	Lb.
	1 lb. bot.	.48	Lb.
SODIUM SULFITE — Photo (Anhydrous)	100 lb. drum	Market	
	25 lb. drum	Prices	
	5 lb. can		

SPEED SOAP — Robport



This product contains Lanolin and Triethanolamine, both of which are expensive skin conditioning agents usually found only in the highest quality cosmetic preparations. An oily feeling will be noted when Speed Soap is rinsed off with water. This oiliness is there for a purpose and is due to Lanolin, a material which closely resembles the natural oils of the skin. Lanolin is incorporated because of its ability to prevent and even cure dermatitis caused by Dichromates and Hydrocarbon solvents. When the hands are dried, no greasy feeling remains.

1 gal. bot.	\$4.00	Gal.
1 qt. bot.	1.25	Qt.
Dispenser	1.75	
In Tubes	.35	Tube

FREE DISPENSER WITH EACH 2½ GALS. LIQUID SPEED SOAP

STAYFLAT SOLUTION — Ansco (Clear or Matte)	1 gal. bot.	\$7.20	Gal.
	1 qt. bot.	3.00	Qt.
	1 pt. bot.	1.80	Pt.
STEEL ROLLER PRIMER Robport (Stanton)	1 gal.	11.60	Gal.
	1 case (8 gals.)	9.60	Gal.
	2 cases or more	9.00	Gal.
	1 qt.	4.60	Qt.
	4 qts.	4.25	Qt.
	1 case (12 qts.)	4.00	Qt.
	1 pt.	2.60	Pt.
	8 pts.	2.40	Pt.
	1 case (24 pts.)	2.25	Pt.

This product was developed to eliminate the present inefficient methods of etching steel rollers of the press inking system.

To prime steel rollers, wipe them clean of all excess ink. Take a clean white rag and apply sparingly to the roller (do not use a bristle brush). Allow to stand a few minutes and remove with clear water. Etching these rollers once a month will eliminate roller stripping.

Rinse hands if solution gets on them and it is best to use rubber gloves.

If press develops roller stripping during run, shut down and apply PRIMER to portions of the roller that are stripping.

CAUTION: Poison

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

CHEMICALS — (Continued)

SULPHUR — Powdered.....	25 lb. drum	\$.16	Lb.
	5 lb. carton	.26	Lb.
SULPHURIC ACID — C. P.....	9 lb. bot.	.20	Lb.
	1 lb. bot.	.49	Lb.
TALCUM			
(See French Chalk)			
TANNIC ACID — U.S.P.....	5 lb. bot.	2.02	Lb.
(Powdered)	1 lb. bot.	2.05	Lb.
TURPENTINE.....	1 gal. can	Market	
(Pure Gum Spirits)	5 gal. can	Prices	
TUSCHE — KORN'S.....	16 oz. bot.	1.75	Ea.
(Liquid)	8 oz. bot.	1.15	Ea.
	4 oz. bot.	.90	Ea.
WETTING AGENT			
(See Intensol — Robport)			
ZINC NITRATE.....	5 lb. bot.	.68	Lb.
(Purified — Crystals)	1 lb. bot.	.73	Lb.

Equipment

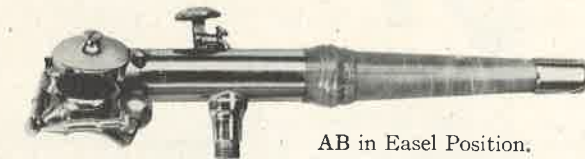
Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

AIRPAINTING EQUIPMENT PAASCHE

We handle the full line of Paasche Artists Airpainting Equipment. Listed below are several of the more popular airbrushes and compressors.

A catalogue describing the complete Paasche line will be sent upon request.



AB in Easel Position.

PAASCHE AB FINE ARTS AIRBRUSH Jet propelled since 1905

Named the Fine Arts Airbrush because of the superlative work it does in the hands of the creative artist, the Paasche AB Airbrush traces the finest hairline in frechand drawing and instantly spreads a small volume of properly atomized color. Makes a clean cut edge with or without frisket. Sprays a fine or coarse stipple for realistic texture. The AB Airbrush works equally well with opaque colors, India ink or thinned oils without clogging.

Recommended for all types of creative and commercial art, including fashion, architectural and monumental designing, where detail must be emphasized. Ninety percent of all newspaper retouchers use the AB Airbrush. Hundreds of these airbrushes used in Aviation Service for aerial designing and photo-retouching, and in other Services for many varied purposes. Produces a finer detail line than any other art instrument.

The AB Airbrush is powered with an air turbine, controlled at any speed up to 20,000 RPM. The turbine reciprocates a finely pointed hardened steel needle which carries color to the airstream where it is finely atomized. Combination air and color lever gives operator instant control from the finest hairline to full spray. Color cup can be adjusted for easel or drawing board use. The needles are easily replaced.

AB AIRBRUSH, complete with one dozen needles packed in end of handle, tube lubricant, screw driver, tweezers, hanger, and hose coupling, with directions, and case\$45.00

Length, 5⁷/₁₆". Net wt., 2¹/₄" oz.

AB Needles, per doz., \$0.90.

AIR HOSE

Is Not Included With Airbrush. Order From List Below.

Airhose For All Artists' Airbrushes Types AB, V, VL, F, H, and AE

A 1/8" 6' Airhose with Couplings.....	\$1.26
Add or deduct for longer or shorter hose, per ft .....	.11
A Braided Airhose, 1/8" ID. 19/64" OD. Working pressure 200 lbs.	
HL-C2 1/8"-1/4"-40 Coupling (Airbrush End) .....	.30
HL-C 1/8"-1/4" Coupling (Compressor End) .....	.30
Larger Airhose For LF, LA, KS, KT, AU, And L Airbrushes	
HL 3/16" 8' Airhose with Couplings	1.78
Add or deduct for longer or shorter hose, per ft .....	.13 1/2
HL 3/16 Braided Airhose, 3/16" ID. 3/8" OD. Working pressure 175 lbs.	
HL-C2 3/16"-1/4" 20° Coupling .....	.35
HL-C 3/16"-1/4" Straight Coupling .....	.35
HF 1/4" Line Valve for attaching to pipe line .....	.75

Over Fifty Years of Service to the Graphic Arts

VL AIRBRUSH — Multiplehead (selfcentering)



America's leading poster artists and displaymen use this fast Airbrush. Dual action control permits instant regulation of color and air without stopping work. This makes for greater flexibility and marvelous freedom in the execution of airpaintings. Used extensively for coloring fish lures, for creating dioramas; a great favorite with sign, display men and window trimmers. Adjustable from a fine line to a full spray.

The VL Airbrush is of the syphon type and has the Paasche self-centering tip which can be replaced without tools by the artist. No time lost mailing airbrush to factory for repairs. For convenience, an extra self-centering tip is enclosed in end of plastic handle.

VLI, 3 or 5 AIRBRUSH, complete with extra needle, extra self-centering tip (in end of handle) color cup, reamer, 3 oz. bottle, hanger and hose coupling, instructions for handling, Packed in Case\$32.00
Length 6 1/4". Net Wt. 4 oz.

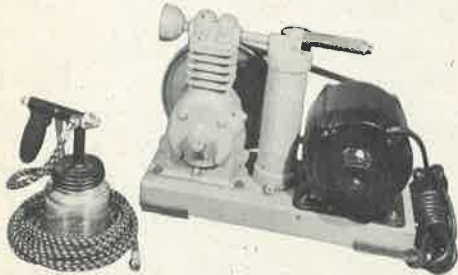
EXTRA PARTS

VLM1, 3 or 5 Multiplehead (with tip)	\$3.50
VLN1, 3 or 5 Needle (Stainless Steel) .....	.60
VLT1, 3 or 5 Tip	1.50
VLE Metal Cup for easel, VLD Metal Cup for drawing board use	1.50
VL 3 oz. Color Bottle complete .....	.85
3 oz. Bottle only .....	.10

Note: VLM3 and 5 Multipleheads with Tips and Needles are quickly attached to VL Airbrush. These larger sizes are used for faster work and for heavier colors, but they do not make as fine a line or detail as the VLM1 head.

F988 PORTABLE ELECTRIC AIRPAINTING UNIT

An Unsurpassable Value in A High Quality Unit that Speeds Painting
and assures Finest Results



This unit is ideal for use in vocational schools and manual training shops. It is a handy outfit for art, display and sign studios, theaters, repair and furniture shops and for general light duty painting. Applies paints and finishing materials of medium consistency. Easily transported; compressor plugs into ordinary electric socket.

F988 Airpainting Unit, complete as listed below
\$64.55.

PE3A Aircompressor, piston type compressor with 1/4 HP, 110V, split phase, 60 cycle, electric motor. Complete with 6 ft. moisture separator. Piston displacement 2.4 cu. ft. per min. of 35 lbs. press. Mounted on channel steel base. With 10 ft. of electric cord and attachment plug\$55.00

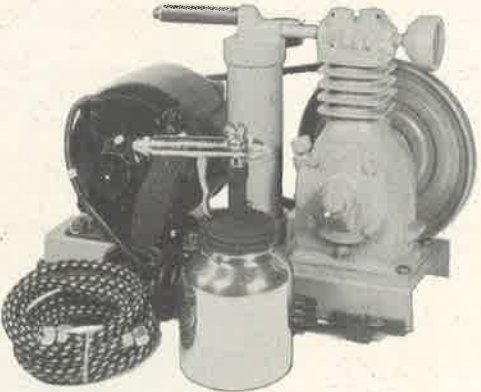
KT Pt. Airgun with two pressure aircaps	7.25
HL 3/16" 12' Airhose with couplings	2.32
Net extra if 1/4 HP 115V, D.C. motor is required.....	14.25
Net Wt. 47 lbs. Shpg. Wt. 68 lbs. Exp. Wt. 90 lbs. 2 cu. ft.	

Over Fifty Years of Service to the Graphic Arts

LIGHT PORTABLE AIRCOMPRESSORS

Paasche Aircompressors are especially designed for Airpainting use. They provide a dependable source of compressed air for the Airbrush Class, the Studio and for General Painting and Decorating work. Paasche Aircompressors deliver highest volume of air from electric power used. They are quiet in operation, and of superior construction throughout.

PE3A AIRCOMPRESSOR\$55.00
with 1/4 HP, 110V, split phase, 60 cycle motor.



PE3A Aircompressor

This dependable V-belt-driven aircompressor is sturdily constructed of highest quality materials and will give long hours of satisfactory service.

PE3A Aircompressor has an air displacement of 2.4 cu. ft. per minute of 35 lbs. pressure; equipped with air inlet filter; 6 c.f.m. Moisture Separator with adjustable Automatic Drain Safety Valve, Gauge; Handle for carrying; 1/4 HP, 110V, split 1 phase, Cy., Electric Motor with 10 ft. Electric Cord and attachment Plug; mounted on steel base.

NET EXTRA FOR 115V DC motor.....\$14.25
Net Wt. 45 lbs. Shpg. Wt. 65 lbs. Exp. Shpg. Wt. 85 lbs. 1 1/4 cu. ft.

CAPACITY—Two L1, AE or three H3, VL or five AB, V or six F2 Airbrushes.
To accommodate more Art Airbrushes, add \$1.00 for each additional outlet.

KS AIRGUN (Pictured with PE3A above)

Convertible External or Internal Atomizing Bleeder Type

For light duty airpainting in display studios, schools, residences, buildings, theaters, shops, etc. Applies paint, lacquer, flock binders, insecticides, mothproofing materials, etc. Operates on low air pressure from a D 1/6 HP Diaphragm Aircompressor delivering 15 lbs. with KSF head. DD or PE3A compressor recommended. Stippled or granular effects can also be obtained by this gun. When heavier materials are used and faster application is desired, airbrush can be converted in a moment from syphon to pressure feed by simple adjustment. The KS is sturdily constructed of highest quality materials; economically operated; a really fine value. Supplied with internal atomizing head with

KIF fan and KIR round spray aircaps.	Net Wt. 1 1/2 lbs.
KS Qt. AIRGUN with KIF and KIR air caps. (Hose extra)	\$9.25
KS Pt. AIRGUN	9.00

Over Fifty Years of Service to the Graphic Arts

LIGHT PORTABLE AIRCOMPRESSORS
(PAASCHE)

F520B STUDIO AIRCOMPRESSOR\$105.00
with ¼ HP, 110V, 1 phase, 60 cycle motor.

This type is preferred by many because it is more economical in operation and the 2½ gal. tank provides storage for air thereby absorbing pulsations, and assuring constant flow of air to the airbrush. Airpressure is built up in the storage tank to 60 lbs., then compressor automatically cuts off. As air is used, causing pressure to drop below 45 lbs., compressor starts pumping again. Thus the compressor has to run only a part of the time to maintain a constant source of compressed air. This efficient unit is mounted on a rugged steel base.

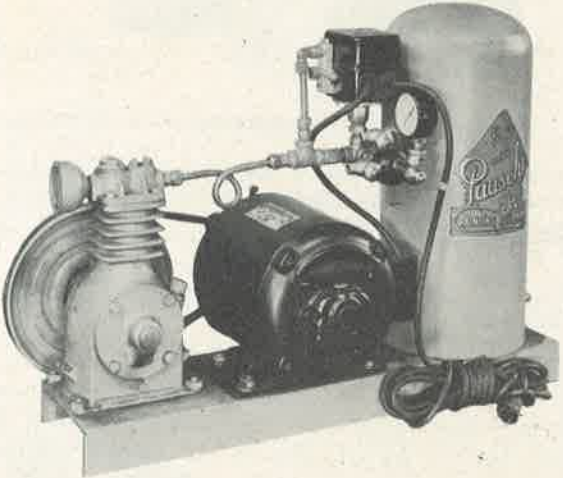
F520B Aircompressor has an air displacement of 2.4 cu. ft. per minute at 555 R.P.M. Has air inlet filter; air regulator; air gauge; 2 outlet valves; check valve; and 2½ gal. air receiving tank. Equipped with ¼ HP, 110V, 1 ph., 60 cy. electric motor; complete with 10 ft. of electric cord and attachment plug.

Net Wt. 90 lbs. Shpg. Wt. 100 lbs. Exp. Wt. 125 lbs. 4½ cu. ft.

NEW EXTRA FOR 115V DC MOTOR.....\$14.00

CAPACITY—Two L1, AE or three H3, VL or five AB, V or six F2 Airbrushes.

To accommodate more than two Art Airbrushes, add \$1.00 for each additional outlet desired.



F520B Aircompressor

AE AIRERASER

With this new improved Aireraser you can erase a fine line or work over a wide area, erasing ink, paint or color, blending highlights or shadows. It removes color like magic without marring the surface. No smudge or streaks. It is an airbrush in reverse, erasing color instead of applying it. Has aluminum gravity feed cup with regulator which controls speed of erasing for varied types of work. AE Aireraser also etches glass and metal. Handy for cleaning jewelry and fine machine parts.

AE Aireraser with aluminum cup and hardened steel tip.....\$9.50

Net wt., 2.5 oz.

AE 11 Tip (hardened steel).....\$0.95
A Eraser Abrasive, ½ lb..... 35

Over Fifty Years of Service to the Graphic Arts

Price List
GELB ARC LAMPS

*Prices below subject to price prevailing at time of delivery.

CAMERA LAMPS:		Shipping	Price With	Add Excise	Add Packing
Model	Wt. Lbs.		Rheostat	Tax	Charge
L-125T	220		\$297.00	\$ 59.40	\$15.00
L-125DDS	500		825.00	165.00	30.00
L-124DD	625		1,884.00	376.80	45.00

PRINTING LAMPS:		Shipping	Price With	Add Packing
Model	Wt. Lbs.		Rheostat	Charge
LI-125T	110v. 190		\$165.00	\$10.00
LI-125T	220v. 190		178.20	10.00
L-126	220v. 190		330.00	10.00

Model		Shipping	Price With	Add Packing
	Wt. Lbs.		Rheostat	Charge
LS-126T	110v. 190		\$256.00	\$10.00
LS-126T	220v. 190		264.00	10.00

Heat Treated Dust Frame Diffuser For LS-126		Price \$33.00	
Double Arc For Vertical Frame			
Model	Shipping	Price With	Add Packing
C-124DA	Wt. Lbs. 190	Rheostat \$231.00	Charge \$15.00

Model		Shipping	Price With	Add Packing
	Wt. Lbs.		Rheostat	Charge
LI-124T	190		\$316.80	\$20.00
L-116SF	225		389.40	25.00
L-116SFX	225		442.20	30.00

Model		Shipping	Price With	Add Packing
	Wt. Lbs.		Rheostat	Charge
LS-126TD	190		\$462.00	\$20.00
LS-126SFX	225		561.00	30.00

Heat Treated Dust Frame Diffuser For LS-126TD		Price \$33.00	
Heat Treated Dust Frame Diffuser For LS-126SFX		Price 66.00	

ACCESSORIES FOR ABOVE LAMPS:				
220 - 240 Volts		400 - 440 Volts	500 - 550 Volts	
AC Transformers		50 to 60 cycles		
Add to Price of Lamp				
1 Pair or One Lamp Require 1 Transformer; Double Deckers 2				
35 amperes.....	\$116.16	\$165.00	\$225.50	Add Packing Charge \$ 6.00
50 amperes.....	129.36	165.00	225.50	6.00
70 amperes.....	140.36	198.00	250.80	6.00
90 amperes.....	155.76	225.50	291.50	6.00
For 25 Cycle: Quote with Rheostat Control for any voltage				

LAMP CARRIERS:		Price	Add Packing
Carriage Carrier — Single Arc.....		\$112.20	Charge \$15.00
Gondola Carrier — Single or Double Decker Lamp.....		462.00	60.00
For 50 Ampere Lamps: Add \$11.20 to each pair of lamps			

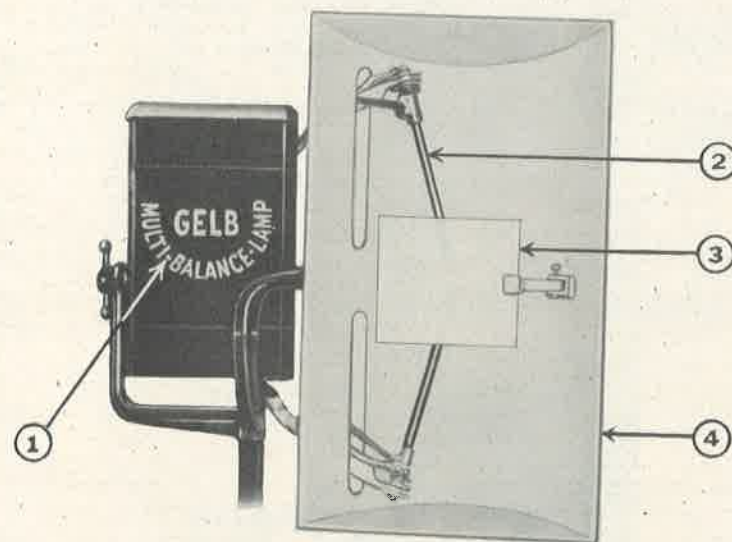
TIMERS:		Price	Add Packing
AC Type with relay up to 50 amperes.....		\$114.00	Charge \$ 6.00
DC Type with relay up to 50 amperes.....		162.00	6.00

Over Fifty Years of Service to the Graphic Arts

THE GELB MULTI-BALANCED
Lever Type LAMP

Produces Uniform Intensity
At Every Exposure

GELB LAMPS

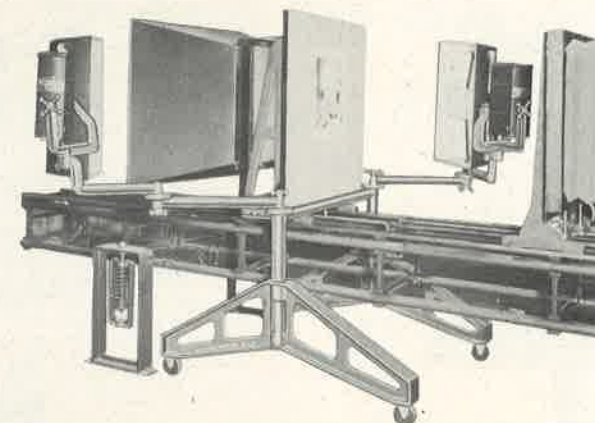


The Multi-Balanced Carbon Arc Lamp is automatically fed. The Carbon holders are so designed that when installing a new holder, the insulation is permanent; all that is required is the removal of two screws and insert new holder, and the carbon will automatically be aligned. All the Multi-Balanced features are covered by Patents and Pat. Pending.

- 1 — The Multi-Balanced mechanism automatically varies in weight corresponding to the diminished burnt off carbons — balancing the carbon weight, as they burn down from a full 12" trim to the finish — producing a balanced and uniform intensity at every exposure.
- 2 — Six hours of continuous operation without touching or retrimming of the carbons, is permitted by the full 12" trim carbons.
- 3 — The New Refractable Frameless Hot Spot Eliminator refracts the light rays rather than diffuses, producing a more evenly distributed illumination.
- 4 — The New Widespread Angle Reflector feature permits the lamps to occupy but 10" of space between the copyboard and darkroom and permits a more even and greater distribution of intensity; especially in the reproduction of same size or enlargement negatives, where an even coverage of light is required. The reflector opening size is 19" x 30". All live parts — carbons, holders and levers — are enclosed.
- 5 — The tilting feature affords greater ease in the illuminating of glossy, streaky and colored copies. Each lamp has a total tilting capacity of 80°, friction tilting at the arc axis.
- 6 — In summary, the Multi-Balanced Lever-Type Lamp produces a strong, uniform and evenly distributed intensity on a copyboard or vacuum frame, with a minimum of handling; cost of operation and maintenance. Available in 35, 50 and 70 ampere capacities.

Over Fifty Years of Service to the Graphic Arts

CAMERA LAMPS



Multi-Balanced Single Arc Camera Lamps, mounted on the Gelb Copyboard Carriage Carrier, attached and moving with the copyboard carriage, maintaining a fixed distance and evenly distributed illumination at all size reproductions. The lamps can be used as illumination for copy or positive reproduction with a minimum of troublesome inconveniences. At no time will vibration be transmitted to the camera from the Carrier. Simple installation; only requires inserting four screws into the Camera Copyboard Carriage.



Model L-125—D.D.S.

Multi-Balanced, Single Arc, full trim, 19" x 30" angle reflector, lever type, Double Decker Camera Lamps. Will evenly illuminate up to 40" x 70" copyboard. Capacity 35 amperes each pair, total 70 amperes, A.C. or D.C. current. Consists of four lamps, two counterbalanced underslung standards and two rheostats.

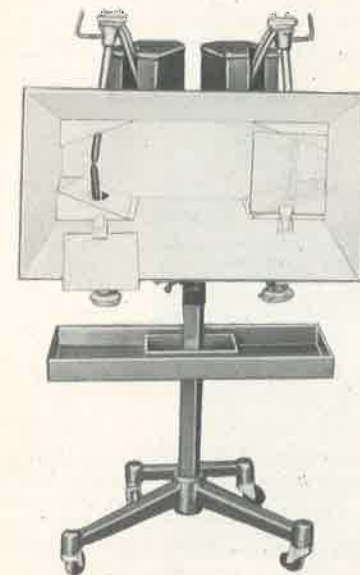


Model L-125T

Multi-Balanced, Single Arc, full trim, 19" x 30" angle reflector, lever type, Camera Lamps. Will evenly illuminate up to a 30" x 40" copyboard. Capacity 35 amperes A.C. or D.C. current. Consists of two lamps, two adjustable standards and rheostat.

Over Fifty Years of Service to the Graphic Arts

PRINTING LAMPS



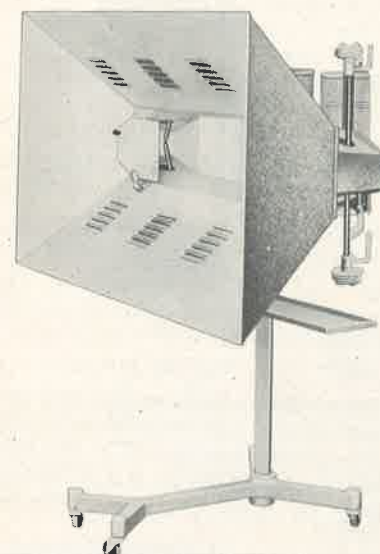
Model L1-124T

Multi-Balanced (two lamps in one reflector), full trim, lever type Printing Lamp. Reflector size 16" x 28". Will evenly illuminate up to the edges a vacuum printing frame up to 40" x 50". Capacity 35 amperes, A.C. or D.C. current. Consists of two individual Multi-Balanced Lamps, one reflector, adjustable standard and rheostat. L1-124T.



Model C-124-D.A.

Double Arc, lever type (two trims to a carbon), Printing Lamp, reflector opening 19" x 22". Will illuminate up to the edges a vacuum printing frame up to 30" x 40". Capacity 35 amperes, A.C. or D.C. current. Consists of one lamp, two arcs, adjustable standard and rheostat. C-124-D.A.



Model L-116-S.F.X.

Multi-Balanced, Single Face (two lamps in one reflector), full trim, lever type Printing Lamp. Will evenly illuminate up to the edges a vacuum printing frame up to 55" x 80". Capacity 35 amperes, A.C. or D.C. current. Consists of two individual Multi-Balanced Lamps, one widespread reflector, adjustable standard and rheostat.

Over Fifty Years of Service to the Graphic Arts

MACBETH
PHOTOGRAPHIC ARC LAMPS AND ACCESSORIES

CAMERA LAMPS

Single arc — 20, 35 or 45 ampere		With AC/DC Rheostat Per Pair	With AC Control Per Pair
Type			
8F	With telescoping stands.....	\$244.00	\$296.50
8FA	Angle-tilting with high-low stands.....	256.00	308.50
8FA	Non-tilting with telescoping stands.....	250.50	303.00
8FA	With CFC1 lamp carrier.....	376.00	428.50
8FA	With CFC2 lamp carrier.....	486.00	538.50
B1	12" trim with telescoping stands.....	268.00	320.50
12B1	12" trim, AIRFLOW, telescoping stands.....	312.00	364.50
U	Universal tilting, telescoping stands.....	283.50	336.00

Double arc — 35 or 45 ampere

7A	With telescoping stands.....	369.50	474.50
B6	12" trim, with telescoping stands.....	383.50	488.50
W1 (30 amp)	Little Giant, telescoping stands.....	474.50	
W1 (30 amp)	Little Giant, CFC3 lamp carrier.....	710.00	
12B6	12" trim, AIRFLOW, telescoping stands.....	499.50	604.50

DOUBLE DECKER SETS

Single arc — 35 or 45 ampere		Per Set	Per Set
8FD5	With counterbalancing stands.....	\$684.00	\$789.00
8FAD5	With counterbalancing stands.....	697.00	802.00
8FA	With CFC4 lamp carrier.....	832.00	937.00
B1D5	With counterbalancing stands.....	732.00	837.00
UD5	With counterbalancing stands.....	752.00	857.00
12B1D5	AIRFLOW, with counterbalancing stands.....	820.00	925.00

Double arc — 35 or 45 ampere

B6D5	With counterbalancing stands.....	963.00	1,173.00
12B6D5	AIRFLOW, with counterbalancing stands.....	1,195.00	1,405.00

NOTE: The above prices cover standard lamps, rheostats, and controls for connection on 110, 208 to 235 volts, DC or 60 cy. AC circuits. Prices on AIRFLOW lamps are exclusive of exhaust units. Federal Tax on all camera lamps is additional. All prices are F.O.B. Philadelphia and are subject to change without notice.

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

MACBETH
PHOTOGRAPHIC ARC LAMPS AND ACCESSORIES

PRINTING LAMPS

Single arc — 35 or 45 ampere		With AC/DC Rheostat	With AC Control
Type		Each	Each
8F	With telescoping stand.....	\$154.00	\$206.50
8FA	Angle lamp with telescoping stand.....	160.00	212.50
U	Universal tilting, telescoping stand.....	175.00	227.50
B1	12" trim, with telescoping stand.....	166.00	218.50
12B1	12" trim, AIRFLOW, telescoping stand.....	190.00	242.50
Double arc — 35 or 45 ampere			
7A	With telescoping stand.....	204.00	256.50
7AW	Widespread, with telescoping stand.....	222.00	274.50
B6	12" trim, with telescoping stand.....	210.00	262.50
B6	12" trim, with counterbalancing stand.....	247.50	300.00
B16	12" trim, with counterbalancing stand.....	294.50	347.00
12B6	12" trim, AIRFLOW, telescoping stand.....	268.00	320.50

SPECIAL PRINTING LAMPS

Downward and Upward Lighting

Single and Double arc — 35 or 45 ampere			
HD1	With reflector and hanger.....	220.00	272.50
HD1	With reflector and counterbalancing stand.....	267.50	320.00
HD2	Double arc, with reflector and hanger.....	322.50	375.00
HR	With fan and ventilator.....	250.50	303.00
HR	Without fan and ventilator.....	219.50	272.00

(Glass furnished extra)

60 AMPERE CAMERA AND PRINTING LAMPS

For 60 amperes add to above list prices as follows:

	Per Pair	Per Pair
Camera Lamps, single arc.....	\$45.00	\$45.00
Camera Lamps, double arc.....	55.00	55.00
	Each	Each
Printing Lamps, single arc or double arc.....	\$40.00	\$40.00

The above prices cover standard lamps, rheostats, and controls for connection on 110, 208 to 235 volt, DC or 60 cy. AC circuits. Prices on AIRFLOW lamps are exclusive of exhaust units. Federal Tax does not apply to printing lamps. All prices are F.O.B. Philadelphia and are subject to change without notice.

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

MACBETH
PHOTOGRAPHIC ARC LAMPS AND ACCESSORIES

Overhead Suspension Camera Lamps with Trackage and Pendants
To Travel with Copyboard

PAIRS — TRACKAGE UP TO 15 FOOT LENGTH*		With AC/DC Rheostat	With AC Control
Single arc — 35 or 45 ampere			
Type		Per Pair	Per Pair
8F -OSP15.....		\$515.50	\$568.00
8FA -OSP15.....		522.00	574.50
B1 -OSP15.....		539.50	592.00
12B1-OSP15, AIRFLOW.....		583.50	636.00

Double arc — 35 or 45 ampere

B6 -OSP15.....	655.00	760.00
12B6-OSP15, AIRFLOW.....	771.00	876.00

DOUBLE DECK SETS — TRACKAGE UP TO 17 FOOT LENGTH*

Single arc — 35 or 45 ampere		Per Set	Per Set
8F -OSP16.....		\$874.00	\$979.00
8FA -OSP16.....		887.00	992.00
B1 -OSP16.....		922.00	1,027.00
12B1-OSP16, AIRFLOW.....		1,010.00	1,115.00

Double arc — 35 or 45 ampere

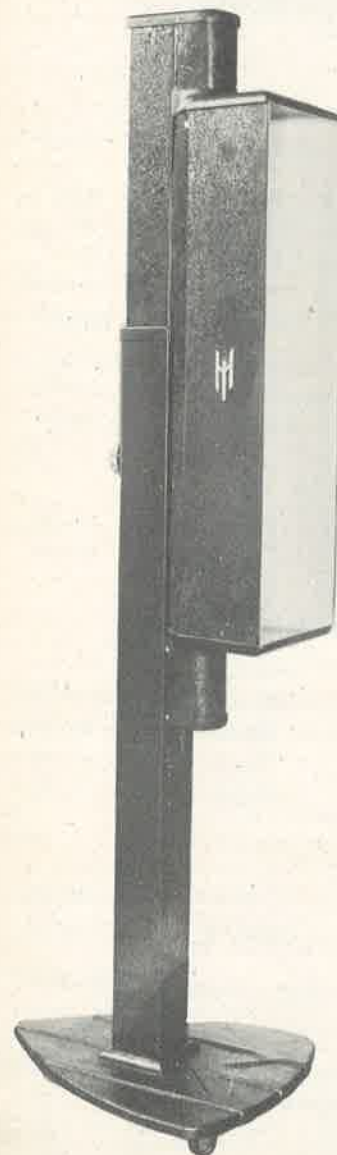
B6 -OSP16.....	1,153.00	1,363.00
12B6-OSP16, AIRFLOW.....	1,385.00	1,595.00

*Prices on extra lengths of trackage furnished on request. When ordering specify length of trackage, as well as height and layout of ceiling.

The above prices cover standard lamps, rheostats, and controls for connection on 110, 208 to 235 volts, DC or 60 cy. AC circuits. Prices on AIRFLOW lamps are exclusive of exhaust units. Federal Tax on all camera lamps is additional. All prices are F.O.B. Philadelphia and are subject to change without notice.

Over Fifty Years of Service to the Graphic Arts

THE NEW MACBETH "LITTLE GIANT"



Macbeth
"Little Giant"
Type W1 Camera Lamp
(Patents Pending)

Many a photographer has been driven to desperation trying to cover the top and bottom of his copy correctly with a pair of single arc lamps. This new LITTLE GIANT solves the problem. It is based on the double decker principle. There are two arcs in each lamp, one arc above the other—double decker results at a price well within the single arc price range.

For correct coverage, for less work in the dark room, for less retouching—in short, for a better quality negative, use a pair of LITTLE GIANTS on the medium size copy board. Here is an arrangement of two arcs within a NONSPOT reflector to give better light-spread up and down and on the edges and corners, and eliminate troublesome bands and spots of light on the center of the copy board.

A pair of LITTLE GIANTS utilizes approximately 90 percent of the total wattage for light—very little waste; whereas with most rheostat-equipped arc lamps practically fifty percent of the current is wasted in the resistance element. This type of lamp is essentially for use on 110 volts, or 110/220 volt, 3-wire line; and may also be connected two-in-series on 220 volts, A. C. or D. C.

Each lamp can be raised or lowered on its standard, as desired. The maximum height is 81", minimum 62". From floor to upper arc, the maximum height is 76", minimum 50". The distance between upper and lower arc is constant, 26". Floor space, 20" x 27". Shipping weight, approx. 300 lbs. per pair.

The LITTLE GIANT is sturdily built and attractively streamlined. Its mechanism is as unobtrusively encased as the mechanism of a watch. This is a lamp you will be more than proud to have in your gallery.

FAR BETTER THAN OLD STYLE SINGLE
OR DOUBLE ARC PAIRS

Over Fifty Years of Service to the Graphic Arts

NEW MACBETH DOUBLE DECKER SET
TYPE 8F-AD5

With Right-Angle Reflector, Occupying Very Small Space. Particularly Adapted to
Dark Room Camera Work or Crowded Quarters

Equipped with the NONSPOT right-angle reflector, scientifically designed to spread the light evenly over the copy board.

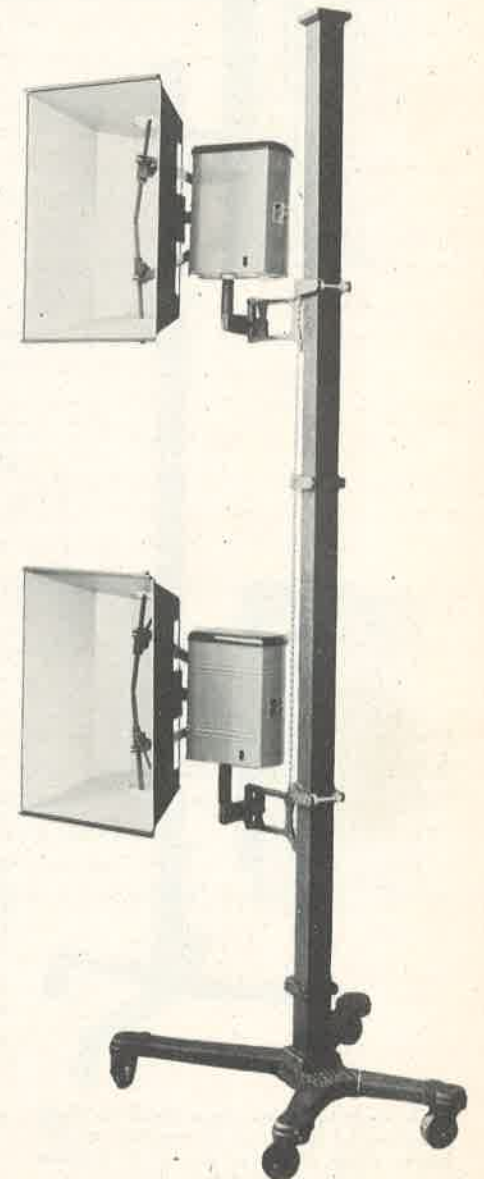
No stray light wasted on ceiling, walls, or floor. No glare in eyes of photographer on next camera. These reflectors capture all the light and deliver it to the copy board where it belongs. Close-up, pyrex glass diffusers can be furnished if wanted for shiny copy or blow-up work.

All live parts, carbons, carbon holders, etc., are entirely enclosed by the reflector, adding greatly to the safety factor. The knife-edge operation of arms—new—kills friction. Cushioned with shock-absorbing mechanism—also new—providing smooth, vibrationless action.

Four lamps, two counterbalancing stands, each lamp counterbalancing the other with single take-up weight installed inside square tubing to eliminate any chance of injury to operator. Square tubing keeps lamps in alignment—no locking or clamping. The lamps can be furnished with tracks and fixtures for overhead mounting with regular or overhead dark-room cameras to travel with copy board. The same counterbalanced movement of lamps as with floor base models.

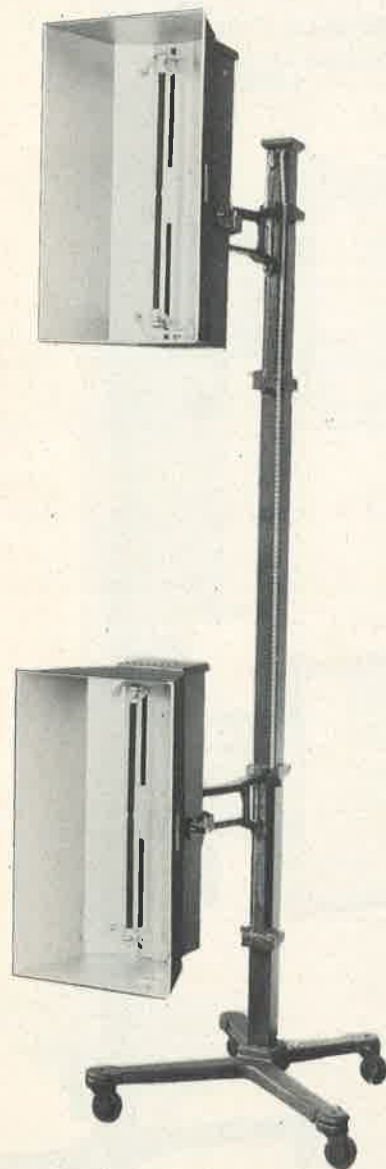
Stock sizes of lamps, 35 and 45 amperes. Special speed-up 60 and 90 ampere sizes to order; 35 ampere size furnished unless otherwise specified.

Overall height	99"
Upper arc at highest adjustment	93"
Lower arc at lowest adjustment	28"
Floor space of stand base	26"x28"
Floor space (with lamp overhang)	42"x28"
Reflector dimensions	23"x15"
Shipping weight, approx.	
	Domestic 850 lbs.; Export 1150 lbs.



Over Fifty Years of Service to the Graphic Arts

DOUBLE DECKER SET TYPE BID5 WITH NEW TYPE B SINGLE ARC LAMPS AND FULL 12" TRIM



The above lamps are also available as Single Arc Camera Lamps, and are mounted on telescoping stands. They are listed as the Macbeth Type B1 Single Arc Camera Lamp.

Complete set consists of four 35 ampere type B1 single arc camera lamps mounted on two counterbalancing stands and two rheostats or two Macbeth Controls (transformers).

The four lamps are mounted on two special counterbalancing stands with each lamp counterbalancing the other. A single take-up weight is used with each pair of lamps. This take-up weight is installed inside the stand pipe to eliminate any chance of injury in raising or lowering the lamps. Lamps may be moved up or down, separately or together from top to bottom of stand—from side to side—backward or forward—every conceivable lamp position without moving stand base.

The carbons are coaxially arranged (not at an angle), so that the arc is at the focal point of the reflector and at the same distance from the back and sides of the reflector at all times. This is important because it promotes evenness of light.

The lamps may be burned throwing the light straight ahead or they may be tilted either upward or downward. They may be utilized for all kinds of copy whether it be flat work, direct object work or color work.

The lamps employ the full 12" trim of carbons. It is only necessary to trim each set of carbons once.

On all type B lamps the reflectors are insulated from the lamp. On BID5 double decker sets the lamps are insulated from the stands. All live parts, carbons, carbon holders, etc., are entirely enclosed by the reflector, adding greatly to the safety factor.

The reflectors are made with facets, designed to throw the light beams up and down, providing a better and more even distribution.

Stock sizes of lamps, 35 and 45 amperes. Special higher amperage to order; 35 ampere size furnished unless otherwise specified.

Overall height	8'3"
Upper arc at highest adjustment.....	7'9"
Lower arc at lowest adjustment.....	23"
Distance between center of arcs at closest adjustment to each other.....	28"
Floor space of stand base.....	27"x28"
Floor space (with lamp overhang).....	43"x28"
Reflector dimensions	15"x28"
Net weight complete double deck set with rheostat	550 lbs.
Net weight complete double deck set with controls	638 lbs.

Over Fifty Years of Service to the Graphic Arts

MACBETH LATEST TYPE 8FA CAMERA LAMPS WITH NONSPOT REFLECTOR



HIGH-LOW STAND

You can slide lamp from top to bottom of stand, permitting the use of one lamp for printing.

A sensational new development. The natural way to light copy. The NONSPOT reflector, designed with vertical reflecting facets, builds up the light around outer edges of copy; cuts down the light concentration in center which always results from use of parabolic type of reflector.

The reflector is mounted at right angles to the arms, providing a lamp that requires only 10 1/2" space from back to front of reflector. The lamps can be placed close to copy and still give even distribution.

This type has been adopted by many leading firms. Photographers found in some cases that they could use one pair of these 8FA lamps on most copy where they formerly used all four lamps of a double deck set, with same exposure time.

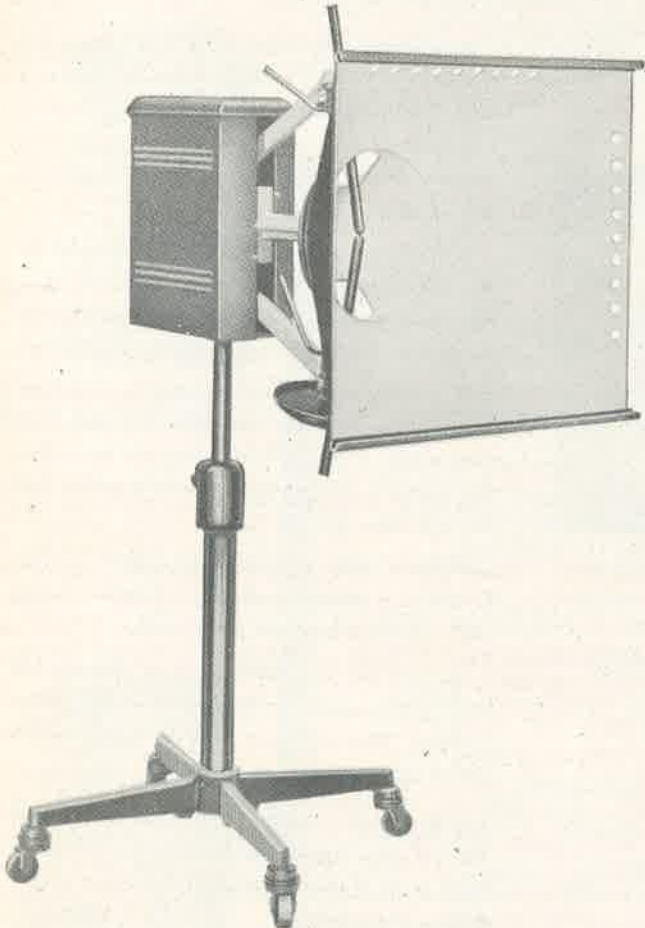
Diffusers—either the closeup type or the type which is inserted in channels in front of reflector — can be used with these lamps for special work.

For A.C. and D.C. Either 35 or 45 amperes, 110 or 220 volts, as ordered. Standard 35 ampere lamps furnished unless otherwise specified. Special amperages to order.

Overall height	75"
Floor to arc at highest adjustment	66"
Floor to arc at lowest adjustment	14"
Reflector dimensions	24" x 15"
Floor space, each lamp.....	20" x 20"
Shipping weight, per pair, approx.....	340 lbs.

Over Fifty Years of Service to the Graphic Arts

MACBETH ARM TYPE SINGLE ARC CAMERA LAMP
Automatic Focusing



Type 8F
OPEN ARC — SINGLE ARC

The 8F lamp provides a speedy, penetrating white light that brings up detail — middle tones as well as high lights and shadows. Its parabolic reflector concentrates the light, making this model ideal for small copy.

For special work the lamp can be equipped with a Macbeth elective close-up diffuser or full reflector-size glass screen.

Shock-absorbing mechanism throughout insures smooth, vibrationless action, and the new knife-edge operation of arms practically eliminates friction.

Stock sizes: 20, 35 and 45 amperes. Special 60 and 90 ampere sizes to order.

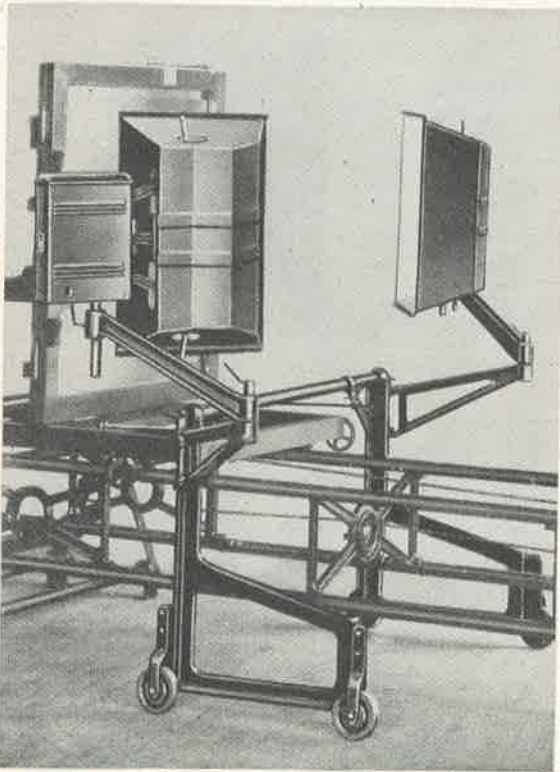
Reflector size	16" x 16"
Floor space, maximum	26" x 19"
Floor space, base only	19" x 19"
Floor to arc, maximum height	64"
Floor to arc, minimum height	36"
Shipping weight, approx.	248 lbs.

MACBETH A.C. CONTROL

Cut power costs in half and eliminate heat by using the new MACBETH CONTROL in place of rheostat on alternating current installations.

Over Fifty Years of Service to the Graphic Arts

LAMP CARRIERS TO TRAVEL WITH COPY BOARD
FOR POSITIVE AND NEGATIVE MAKING



CFC1 Carrier with 8F-A Lamps

Here is a real innovation—the new Macbeth Lamp Carriers, by means of which the lamps are carried on their own base, entirely independent of the camera affected, because weight of Vibration of lamps is not transmitted to camera, nor are spring mountings of camera affected, because weight of lamps is entirely supported by the Carrier. Large rubber casters insure easy movement with copyboard. The Carriers are adjustable to fit any make of camera. Four floor-type Carriers are now available: CFC1, CFC2, CFC3, and CFC4.

The CFC1 Carrier, shown in above photograph, provides mounting for a pair of camera lamps, such as the type 8F-A, for negative making. This Carrier with its triple-jointed arms that can be tightly clamped in any desired position, permits practically a universal setting of the lamps in relation to the copy board: either side of center, 5'; back and forth, 4'; height adjustment, 10". Standard Carrier adjustment: clearance inside brackets, maximum 52", minimum 28"; vertical adjustment of crossbar, maximum clearance 34", minimum clearance 10". Arm swing, 90° +; arm radius, 36".

CFC2 Carrier. Constructed the same as CFC1, with the exception that lamps may also be swung around to back of copy holder for making positives. Arm swing 180° +; radius, 60".

CFC3 Carrier. For use with the new LITTLE GIANT lamps, for both negative and positive making. Arm swing 90° +; arm radius, 42". Reflected light method.*

CFC4. A Carrier for use with double lamps, such as the type 8F-A, with full swing from front of copy holder for making negatives to back of copy holder for making positives. Arm swing, 180° +; radius, 66".

* CFC6 Carrier for LITTLE GIANT Lamps to make negatives and positives by direct light.

Over Fifty Years of Service to the Graphic Arts

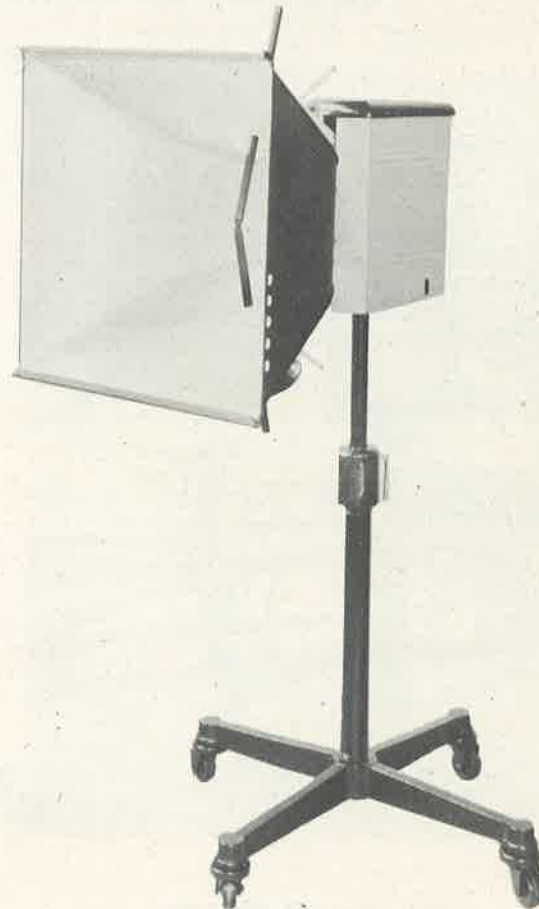
TYPE 8F SINGLE ARC PRINTING LAMP

A single arc providing even coverage over printing frame with maximum speed. This lamp is used on the smaller frames where double arcs are not required.

The modern NONSPOT light-distributing reflector is an improvement over the old parabolic type.

Lamp is cushioned with frictionless and shock-absorbing mechanism to insure smooth, vibrationless action. Compact, rugged, and easily serviced.

Standard stock sizes 35 and 45 amperes; 35 ampere size furnished unless otherwise specified. Special speed-up 60 ampere size to order.



Reflector size	17"x17"
Floor space, maximum	25"x19"
Floor space, base only	19"x19"
Floor to arc, maximum height	48"
Floor to arc, minimum height	29"
Shipping weight, approx.	175 lbs.

MACBETH A. C. CONTROLS

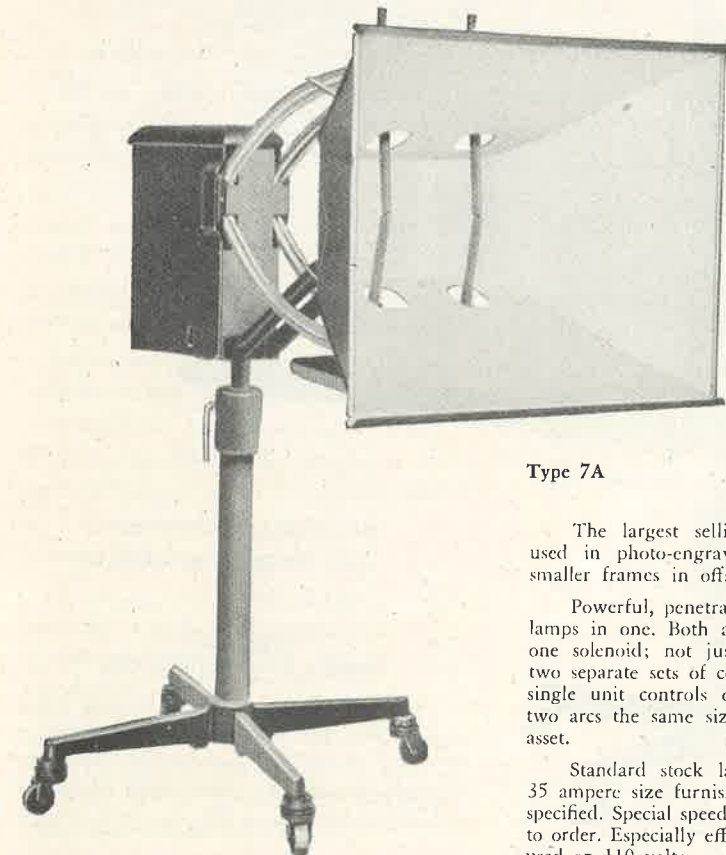
Cut power costs 45% on 110 volts or 70% on 220 volts and eliminate heat by using the new Macbeth Control in place of rheostat on alternating current.

Over Fifty Years of Service to the Graphic Arts

MACBETH ARM TYPE DOUBLE ARC
PRINTING LAMP

AUTOMATIC
FOCUSING

Type 7A
OPEN ARC
DOUBLE ARC



Type 7A

The largest selling printing lamp. Widely used in photo-engraving plants and with the smaller frames in offset and litho plants.

Powerful, penetrating light of two single arc lamps in one. Both arcs operated electrically by one solenoid; not just two arcs in series with two separate sets of controlling mechanisms. The single unit controls of this 7A makes possible two arcs the same size and speed—a very great asset.

Standard stock lamps 35 and 45 amperes; 35 ampere size furnished where amperage is not specified. Special speed-up 60 or 90 ampere lamps to order. Especially efficient on 220 volts. May be used on 110 volts.

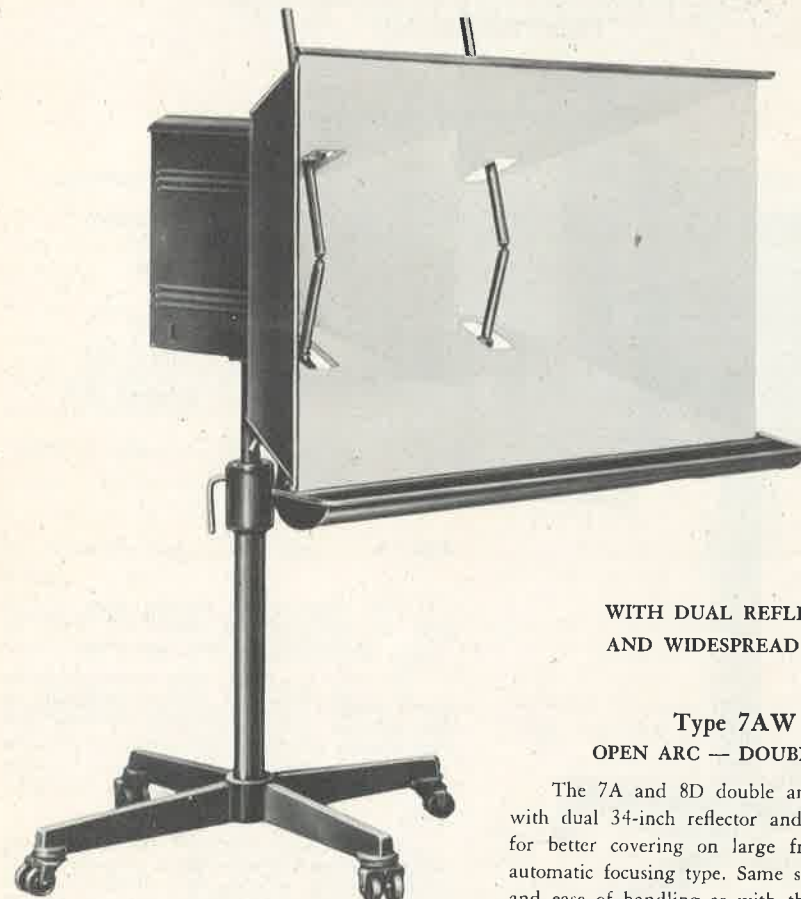
Reflector size	17"x22"
Floor space, maximum	22"x33"
Floor space, base only	18"x18"
Floor to arc, maximum height	50"
Floor to arc, minimum height	31"
Overall height	58"
Shipping weight, approx.	195 lbs.

MACBETH A. C. CONTROL

Cut power costs in half and eliminate heat by using the new MACBETH CONTROL in place of rheostat on alternating current installations.

Over Fifty Years of Service to the Graphic Arts

ARM TYPE DOUBLE ARC PRINTING LAMP



WITH DUAL REFLECTOR
AND WIDESPREAD ARCS

Type 7AW
OPEN ARC — DOUBLE ARC

The 7A and 8D double arc printing lamps with dual 34-inch reflector and arcs wide apart for better covering on large frames. Open arc, automatic focusing type. Same simple mechanism and ease of handling as with the 7A printer.

Type 7AW

Standard stock lamp, 35 or 45 amperes. The 35 ampere size is furnished unless otherwise ordered. Special 60 or 90 ampere sizes to order.

Especially efficient on 220 volts. May be used on 110 volts.

Reflector size	21"x34"
Floor space, maximum	34"x37"
Floor space, base only	21"x21"
Floor to arc, maximum height	50"
Floor to arc, minimum height	31"
Overall height	60"
Shipping weight, approx.	230 lbs.

MACBETH A. C. CONTROL

Cut power cost in half and eliminate heat by using the new MACBETH CONTROL in place of rheostat on alternating current installations.

Over Fifty Years of Service to the Graphic Arts

THE PRODUCTION PRINTING LAMP
FOR THE MODERN LARGE FRAME

Type B16

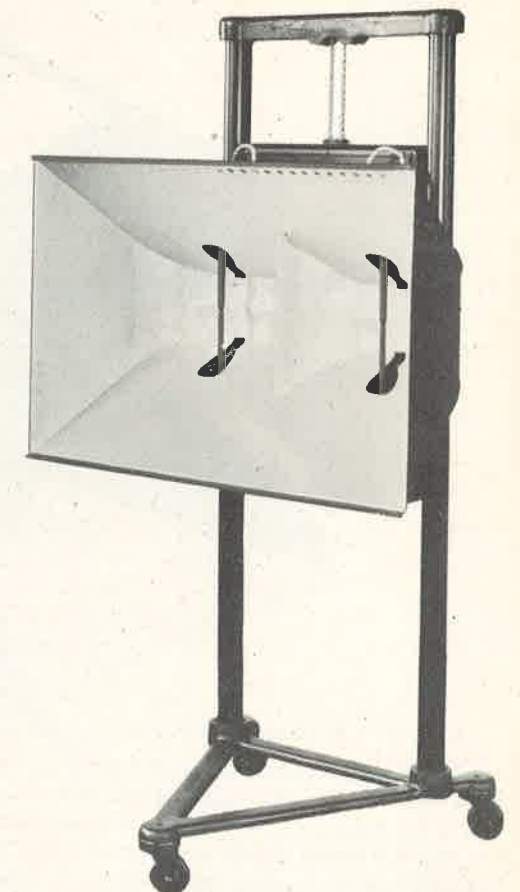
DOUBLE ARC — OPEN ARC

The best covering lamp ever devised for large printing frame. Scientifically designed NONSPOT REFLECTOR builds up light on edges and corners of frame. Direct and reflected light. No after-thought accessory needed. You can load frame to capacity and still bring up edges and corners without over-printing center. No fuzzy prints, no halation.

Full twelve-inch trim of carbons. It is only necessary to trim each set of carbons once. Burns five hours without re-trimming. Carbons burn in perpendicular position, not at an angle. Automatic focusing arcs maintain constant focal position. This means more even intensity throughout exposure.

Mounted on counterbalancing stand. Lamp very easily moved up or down. Large ball-bearing casters make it easy to move stand in any direction.

Standard lamp 45 emperes. Higher amperage if wanted (see price list). A 45 ampere B16 gives more light and better coverage than a 90 ampere single arc on 220 volts.



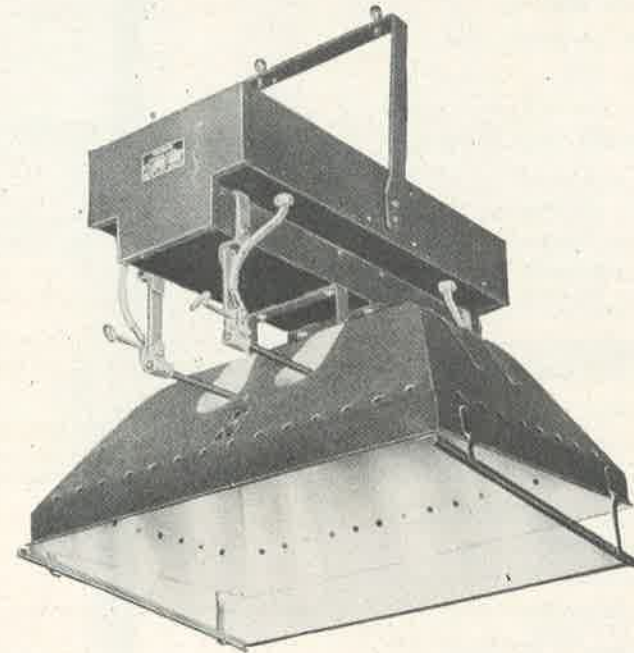
Reflector size	25"x37"
Floor space, maximum	28"x37"
Floor space, base only	28"x28"
Floor to arc, maximum height	62"
Floor to arc, minimum height	20"
Overall height	78"
Shipping weight, approx.	450 lbs.

MACBETH A. C. CONTROL

Cut power costs in half and eliminate heat by using the new MACBETH CONTROL in place of rheostat on alternating current installations.

Over Fifty Years of Service to the Graphic Arts

TYPE HD2 DOUBLE ARC PRINTING LAMP
Downward Lighting for the Horizontal Frame



IT'S NEW! A hangdown lamp with powerful light to put the "zip" in production.

The HD2 is a double arc lamp for the larger HORIZONTAL printing frame and compares to a great extent with the Macbeth B16 double arc lamp used widely for the large vertical printing frame. Here is featured a coaxial arrangement of carbons with full twelve-inch trim, so that it is necessary to trim only once for the burning of each set of carbons. The printer will find the lamp very accessible and easy to trim. Once the current is turned on, the arcs will burn for over five hours without shifting position in relation to reflector.

The ample NONSPOT reflector spreads brilliant white light well over a large printing surface. Unless otherwise specified, the standard 45 ampere HD2 lamp is furnished. Higher or lower amperage lamps to order.

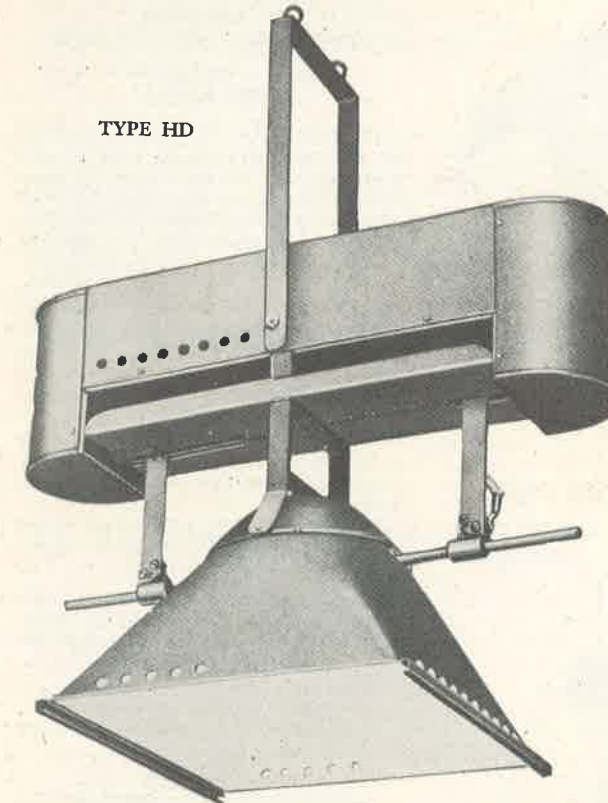
A new system of arc control and an effective baffle system make a sturdy, dependable light source. A clear glass protective screen with frame is placed beneath the arcs. As an additional safety factor, it is recommended that pyrex or other equally efficient heat-resisting glass be substituted for the clear glass. Prices covering heat-resisting glass will be furnished upon request.

Reflector size.....Approx. 31" long x 21" wide
Distance from top of lamp housing to bottom edge of reflector..... 25"
Shipping weight, approx.Domestic 290 lbs., Export 360 lbs.

Over Fifty Years of Service to the Graphic Arts

SINGLE ARC PRINTING LAMPS FOR HORIZONTAL FRAMES

TYPE HD



Type HD

Especially designed to throw the light directly downward for horizontal printing.

Provided with clear glass screen. Special screens and filters furnished to order at additional cost.

Stock sizes 35 and 45 amperes. Special higher amperage sizes to order. A.C. or D.C.

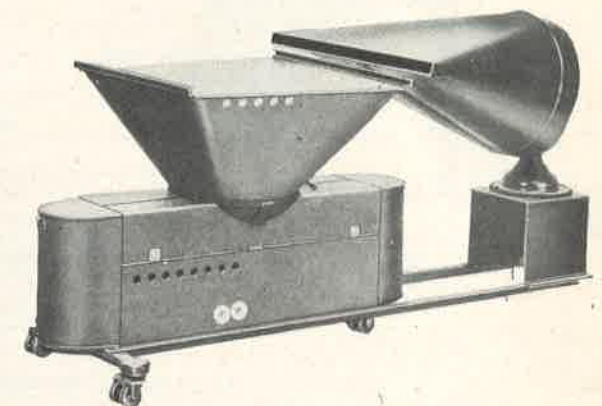
Type HR

The HR lamp equipped with fan and ventilator attachment, designed to burn in horizontal position and throw the light upward.

Extensively used with horizontal printing frames and lithographic photo-composing machines, greatly reducing exposure time on this work. Very efficient for all horizontal printing.

Can be furnished without fan and ventilator attachment.

Stock sizes 35 and 45 amperes. Special higher amperage sizes to order. A.C. or D.C.



TYPE HR

Over Fifty Years of Service to the Graphic Arts

THE NEW MACBETH "AIRFLOW" LAMPS
Type 12B1 Single Arc and Type 12B6 Double Arc

A Necessity for
AIR CONDITIONED GALLERIES
A Boon to Photographers in
Every Gallery

GOOD FRESH AIR! No one has to be "sold" on that idea. Consequently, the new carbon arc AIRFLOW lamp is its own best salesman. Air passes through the front of the reflector and is carried off and out of the building through an airduct, readily connected to an exhaust system. This means that the air surrounding the arc does not recirculate in the room.

The 12B AIRFLOW is the newest of Macbeth's line of "B" lamps—all of which have the full 12-inch trim of carbons, making it possible to get five hours' burning on one trim. The lamps are equipped with newly designed full-coverage reflectors, and burn either straight or tilted, as desired. The mechanism and carbon ends are entirely enclosed in the lamp housing for the photographer's protection and to prevent stray light getting into the gallery.

DISTINCTIVELY modern in design with baked-on crackle finish, the AIRFLOW lamp can be furnished on any of the following mountings:

DOUBLE DECKER SET OF FOUR CAMERA LAMPS

- (1) On two 8-foot D5 counterbalancing stands.
- (2) On CFC4 floor-type carrier to move with copyboard.
- (3) On overhead tracks with pendants:
OSP16 suspended from ceiling or
OSP18 with floor support posts, to move with copyboard.

ONE PAIR OF CAMERA LAMPS

- (1) On two 7-foot counterbalancing stands.
- (2) On two telescoping stands.
- (3) On CFC1 or CFC2 floor type carrier to move with copyboard.
- (4) On overhead tracks with pendants:
OSP15 suspended from ceiling or
OSP17 with floor support posts, to move with copyboard.

ONE PRINTING LAMP

- (1) On 6-foot counterbalancing stand.
- (2) On telescoping stand.

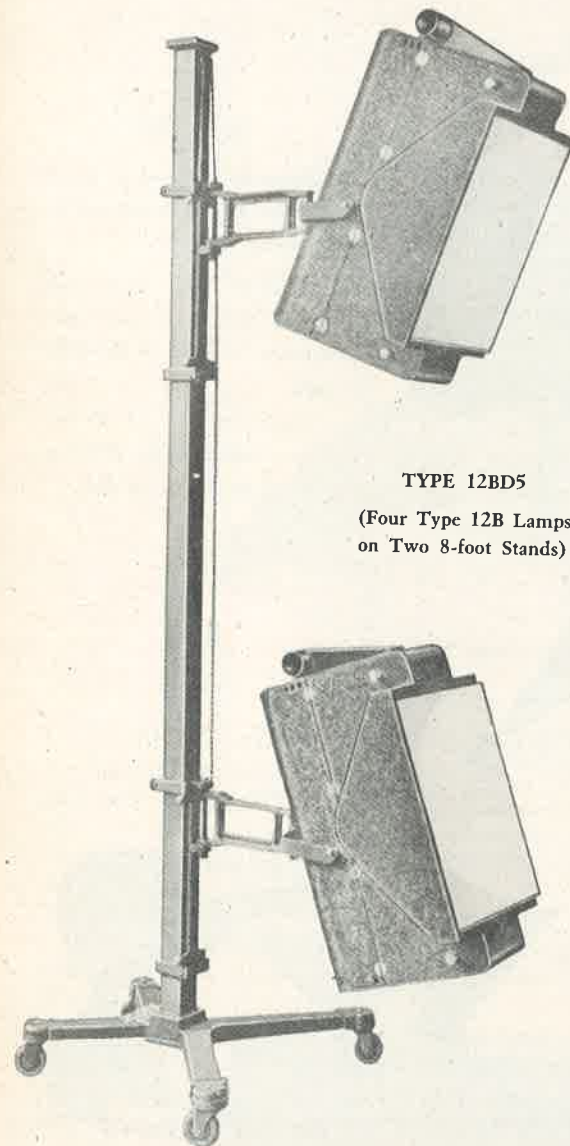
Stock sizes, 35 and 45 amperes. Special high amperage sizes to order.

AN EXHAUST UNIT consisting of motor-driven fan, manifold, flexible steel tubing, carrying arms, and supports may be furnished along with the lamps as extra equipment, to order. AIRFLOW lamps will not operate satisfactorily without proper exhaust equipment.

MACBETH A.C. CONTROL

Cut power costs in half and eliminate heat by using the new MACBETH CONTROL in place of rheostat on alternating current installations.

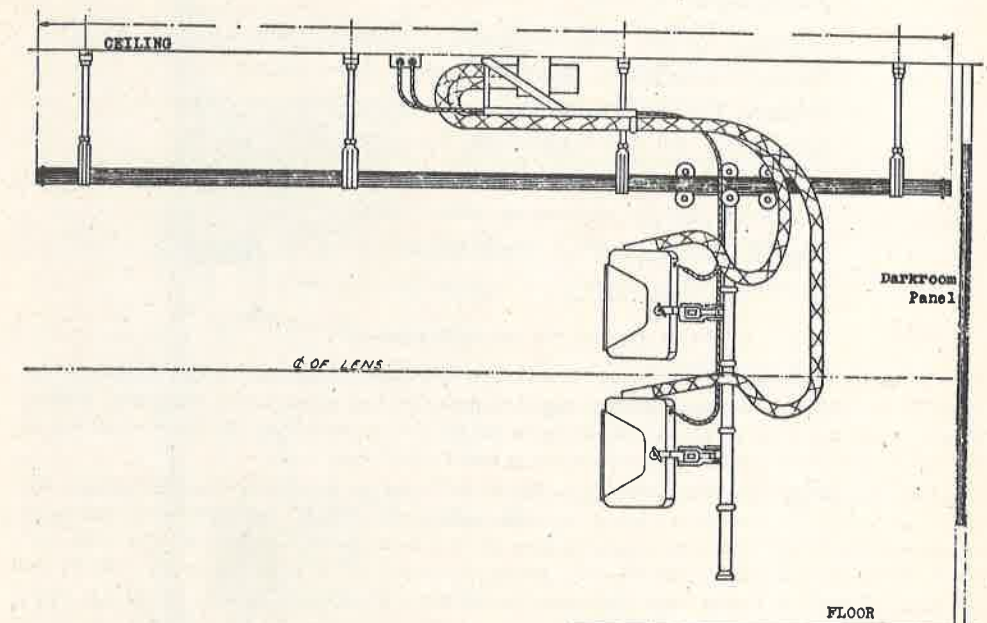
Over Fifty Years of Service to the Graphic Arts



TYPE 12BD5
(Four Type 12B Lamps
on Two 8-foot Stands)

MACBETH OSP16 OVERHEAD MOUNTING TO MOVE
LAMPS WITH COPYBOARD

(Airflow Lamps and Exhaust Unit Illustrated)



THE OVERHEAD TRACKAGE shown above consists of two sets of parallel tracks, each set yoked together and one set mounted each side and parallel to camera center. Pendants carry the four lamps mounted on hinged arms and counterbalanced to be raised or lowered as desired. Provision is made to move the lamps by rods from pendants to copyboard. (Height and layout of ceiling should be specified.)

EXHAUST UNIT furnished as extra equipment, to order.

Over Fifty Years of Service to the Graphic Arts

PEASE "HELI-O-LITE" WHITE FLAME
OPEN ARC LAMPS

HELIO-LITES HAVE 5 EXCLUSIVE FEATURES

Patented Electric Circuit — which prevents heavy currents through the solenoid coil — minimizes burn-outs and assures unequalled arc stability.

Automatic Carbon Feed Mechanism — which provides much longer burning period before retrimming. Saves carbon.

Balanced Trouble-Free Mechanism — which eliminates dash-pots, springs and other fragile parts. Arc starts instantaneously.

Scientifically Designed Reflectors — which give even coverage without accessories required on other makes.

Rugged Construction — which assures years of efficient operation and a minimum of maintenance expense.

HELIO-LITE SPECIFICATIONS

The 35 ampere Close Coupled Heli-O-Lite, in the Single Arc Type, measures 66" above the floor to the center of the Arc at the highest adjustment and 41" above the floor at the lowest adjustment. Printing Bracket lowers Arc to 17" above floor at low point. In the Double Deck Type, the center of the Arc at the highest adjustment is 94" above the floor, 20" at lowest adjustment.

All Twin Arc Models and 50 and 90 ampere Single Arc Types on Telescoping Standard measure 50" above the floor to the center of the Arc at the highest adjustment, and 28" above the floor at the lowest adjustment. The 50 and 90 ampere Single Arc Type Heli-O-Lite on Spring Balance Standard measures 66" above the floor to the center of the arc at the highest adjustment, 28" at lowest adjustment. The 50 and 90 ampere Heli-O-Lite Double Deck Models measure 78" above the floor to the center of the Arc at the highest adjustment, 28" at lowest adjustments.

Resistance Coils, of heavy Advance or Nichrome wire amply ventilated and protected, are usually mounted on lamp base but may be furnished for wall mounting, if so specified, at slight extra charge.

Spring Balance Standard consists of two iron pipe uprights equipped with sliding brackets. These are set securely into a sturdy cast iron base on ball bearing casters, having three inch solid rubber rollers. At the top of the Standard is a strong Pullman spring attached to the sliding bracket upon which the lamps are mounted. A hand set screw locks the lamp securely any height from the floor.

Telescoping Standard consists of two telescoping lengths of black iron pipe set into the same sturdy base described above. A strong hand set screw and a steel pin for insertion through drilled holes in the pipe lock the lamp at the desired height.

The 50 and 90 ampere Single Arc are furnished on either Telescoping or Spring Balance Standards. All Double Deck Models, of course, are of the Spring Balance Type, which permits raising or lowering the upper lamp with much greater facility. All Twin Arc Models, whether of the 35, 50 or 90 ampere Type, are furnished on Telescoping Standard only. All Pease Heli-O-Lites are treated with a special baked-on aluminum paint which increases the reflector's efficiency by 20%.

Over Fifty Years of Service to the Graphic Arts

CAMERA ARC LAMPS

PEASE 35 AMPERE DOUBLE DECK "HELI-O-LITE"

No. 57960

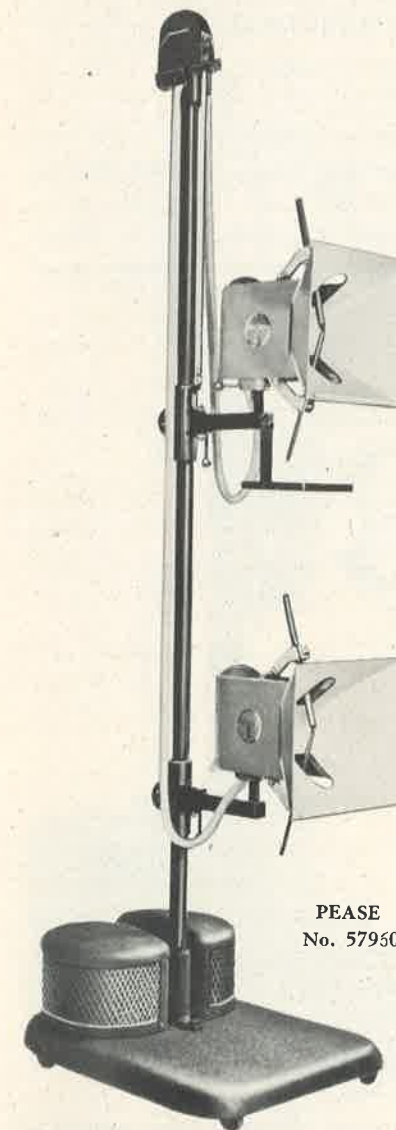
A close coupled lamp having many uses and great economy of operation. It consists of two single arc lamps mounted vertically on a spring balance standard, one speed only for each lamp, wired for 220 volts Direct or Alternating current in series with resistance coil. The lamps may be set at a variety of horizontal angles, the upper lamp may be used in one position while the lower lamp is used in another. The spring balance standard makes the vertical adjustment an easy operation. Each lamp may be pivoted through a horizontal arc of 180 degrees. Copyboards of over 100 inches in either dimension have been satisfactorily lighted by using a pair of Double Deck "Heli-O-Lites." Wall mounting of resistance coils with panel board may be had at additional charge.

SPECIFICATIONS

Overall Height at Highest Adjustment.....	101"
Overall Height at Lowest Adjustment.....	27"
Center of Upper Arc at Highest Adjustment.....	94"
Center of Lower Arc at Lowest Adjustment.....	20"
Floor Space	
Base Measurement only.....	22½"x34½"
Including Lamp overhang.....	22½"x34½"
Reflectors (opening) each.....	13" x13"

APPROXIMATE WEIGHT

Net Weight	189 lbs.
Shipping Weight.....	325 lbs.
Pease Streamlined Scissors Type DOUBLE Deck Heli-O-Lite Open Flame Arc Lamp consisting of two lamps mounted vertically on SPRING BALANCE Standard, Complete with Resistance Coils, wired for 110 volts DC or AC individually, or 220 volts DC or AC in series, each.....	\$375.00
Wall mounting of Resistance with Panel Board.....	\$20.00



Pease Single Deck 35 Ampere "Heli-O-Lite" No. 57950

Pease SINGLE Deck, similar to above No. 57960, but mounted instead on a telescoping standard — for 110 volts AC or DC each..... \$112.50

(Above Camera Arc Lamps subject to FEDERAL EXCISE TAX)

Over Fifty Years of Service to the Graphic Arts

PRINTING ARC LAMPS

PEASE SINGLE DECK 35 AMPERE "HELI-O-LITE"

No. 57951

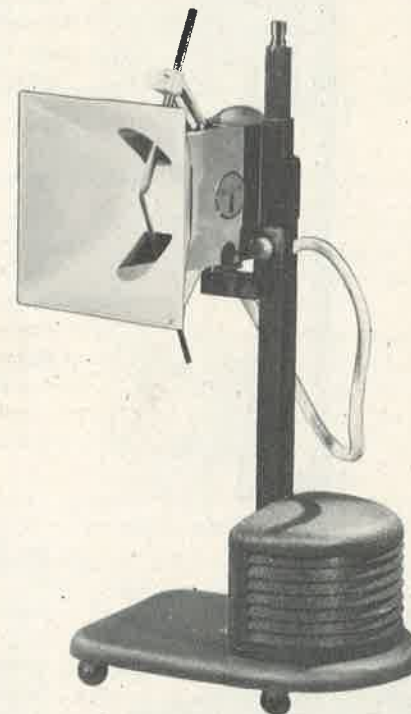
Similar to "Heli-O-Lite" No. 57950 except that it is provided with a special bracket to give lower adjustments for printing purposes. It is a single deck, streamlined close coupled, one speed, single arc printing lamp mounted on telescoping standard and wired for 110 volts Direct or Alternating current. The lamp can be pivoted horizontally through an arc of 180 degrees. The resistance coils are mounted on the sturdy base although wall mounting of resistance with panel board may be had at additional expense.

SPECIFICATIONS

Overall Height at Highest Adjustment.....	71"
Overall Height at Lowest Adjustment.....	24"
Center of Arc at Highest Adjustment.....	66"
Center of Arc at Lowest Adjustment.....	41"
Printing Bracket lowers Arc Center to.....	17"
Floor Space	
Base Measurement only.....	15 1/8" x 20 3/4"
Including Lamp overhang.....	15 1/8" x 20 3/4"
Reflector (opening).....	13" x 13"

APPROXIMATE WEIGHT

Net Weight	65 lbs.
Shipping Weight.....	100 lbs.



PEASE No. 57951

Pease Streamlined Scissors Type Single Deck Heli-O-Lite Open Flame PRINTING Lamp, mounted on TELESCOPING Standard and provided with special bracket to give lower adjustments for printing purposes, complete with Resistance Coils, wired for 110 volts DC or AC, each.....\$162.50
Wall mounting of Resistance with Panel Board.....\$15.00

Over Fifty Years of Service to the Graphic Arts

PRINTING ARC LAMPS

PEASE 35 AMPERE TWIN ARC "HELI-O-LITE"

No. 57863

A rugged and dependable photographic arc lamp especially adapted for vacuum frame and printing frame use where a wide area of illumination is required. It consists of two individual lamp mechanisms, connected for operation together in series on 220 volts Direct or Alternating current, in series with resistance coils. It is mounted on a telescoping standard, set securely on a strong base. Wall mounting of resistance coils with panel board may be had at additional charge.

SPECIFICATIONS

Overall Height at Highest Adjustment.....	58"
Overall Height at Lowest Adjustment.....	36"
Center of Arcs at Highest Adjustment.....	46"
Center of Arcs at Lowest Adjustment.....	24"
Floor Space	
Base Measurement only.....	22" x 28"
Including Lamp overhang.....	22" x 28"
Reflector (opening).....	21" x 23 1/2"

APPROXIMATE WEIGHT

Net Weight	115 lbs.
Shipping Weight.....	200 lbs.



PEASE No. 57863

Pease Twin Arc Heli-O-Lite, consisting of two lamps mounted horizontally in one reflector on TELESCOPING standard, one speed only for each lamp, complete with Resistance Coils, wired for 220 DC or AC in series, each.....\$325.00
Wall mounting of Resistance with Panel Board.....\$20.00

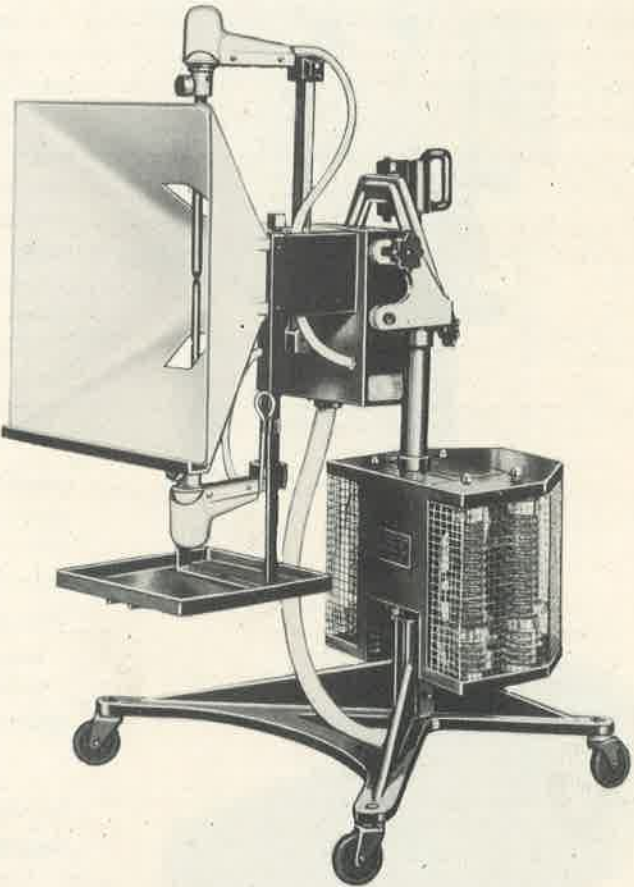
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PRINTING ARC LAMPS

PEASE "HELI-O-LITE" No. 57501

90 Ampere, Single Deck, One Speed, Printing Lamp, mounted on telescoping standard and wired for 110 volts A.C. or D.C. Fastest single arc printing lamp in existence.

Pease 90 Ampere, Single Arc Heli-O-Lite is the most powerful single arc of the Pease Heli-O-Lite line. This lamp is capable of 100,000 candle-power which "digs in" on copy as no other lamp available. The 90 Ampere Heli-O-Lite is also manufactured in Single Arc Camera, Twin Arc and Double Deck Types.



Pease Vertical Carbon Type Heli-O-Lite Open Flame Arc Lamp mounted on TELESCOPING Standard, complete with Resistance Coils, wired for 110 volts direct or alternating current, each.....\$350.00
Wall mounting of Resistance with Panel Board.....\$15.00
Net Weight.....185 lbs.
Shipping Weight.....285 lbs.

Over Fifty Years of Service to the Graphic Arts

THE BALDWIN PRESS WASHER

A Model for Every Type and Size of Offset Press

SAVES { • 60% to 90% of wash-up time
• 90% of wiping-rag expenditure
• damage to rollers and to the fingers of pressmen
• readjusting of rollers

ONCE ATTACHED, BECOMES AN INTEGRAL PART OF YOUR PRESS. ROLLERS NO LONGER NEED BE MOVED AND REPLACED. A TURN OF A THUMB-SCREW STARTS OR STOPS CLEANING OPERATION.

A bakelite or special alloy contractor engages the ink drum, gathers the ink from the entire roller system, and deposits the ink in a brass ink basin. This basin is quickly removed and easily cleaned.

The Baldwin Press Washer is so located as to avoid all interference with regular press operation, and is readily accessible. Therefore, it need never be removed. And it will last for the life of the press.

The bakelite or special alloy contactor (your choice) will last for at least one year. These may be purchased thereafter for a moderate price.

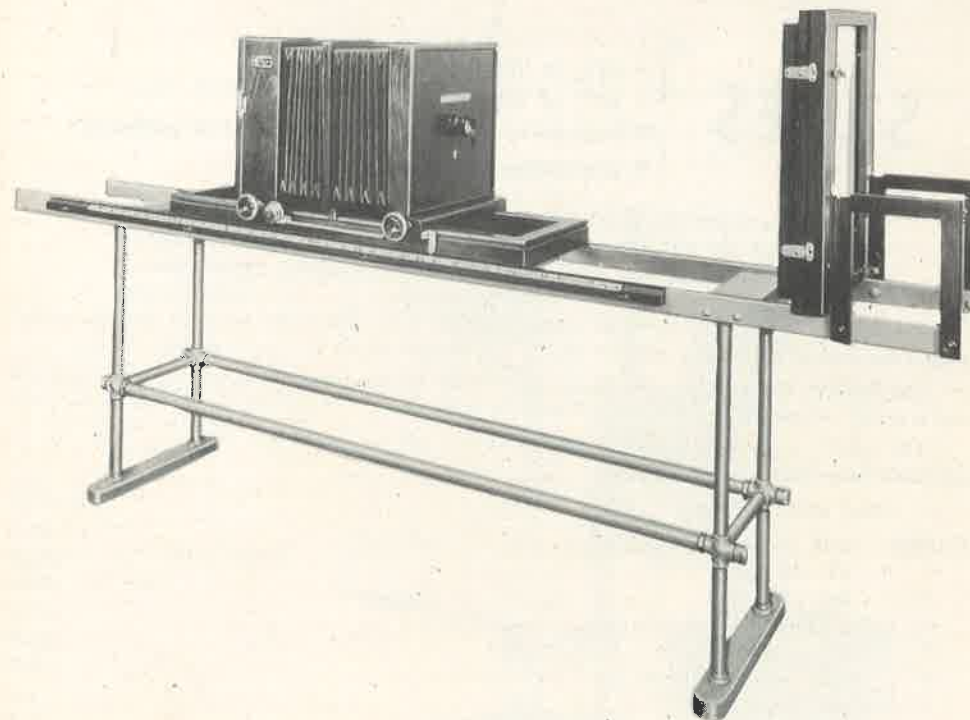
Press Model	Price Each
HARRIS — LSB (17 x 22)	\$ 80.00
" CL (19 x 25)	150.00
" S4L (20 x 30)	150.00
" LSN (21 x 28)	110.00
" S5L — EL (22 x 34)	155.00
" LSQ — LSR (26 x 40)	165.00
" S6L (28 x 34)	155.00
" S8L (28 x 42)	175.00
" LSS — LST (35 x 45)	180.00
" S7L (36 x 48)	180.00
" LB — GT (41 x 54)	180.00
" LSW (41 x 54)	185.00
" LSJ — LSK — LSM (42 x 58)	185.00
" LF — LT (44 x 64)	185.00
" LSF — LSG — LSH (46½ x 68½)	190.00
MIEHLE — 28 x 42	170.00
" 41 x 54	185.00
" 44 x 64	190.00
HOE — 41 x 54	175.00
POTTER — 38 x 52	185.00
" 41 x 54	190.00
WEBENDORFER — 17 x 22	80.00
" 22 x 29	110.00

Baldwin Press Washers are made for every type and size of offset press. The above list is not a complete one, but is merely intended as an approximate price guide. For presses other than those listed, please write us for further particulars.

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

ROBERTSON GALLERY CAMERA



TYPE C-S

This type camera is made to fill the need for a small inexpensive camera. The camera is equipped with scale focusing, tilting type copy board and film holder. Regular equipment on this camera does not include lens board movements from the rear of camera bed, but the mechanism can be furnished on the camera for moving the lens in a vertical or horizontal position from the rear of camera. The camera has no turntable.

This camera produces a fine quality of negative.

This camera is furnished either with or without screen mechanism.

ROBERTSON, TYPE C-S, GALLERY CAMERA, complete with stand, scale focusing system, proportioning scale, film holder only and tilting type glass covered copy board:

	Without Screen Mech.	With Screen Mech.
14" with 20 x 24" glass covered copy board† and 10' stand	\$450.00	\$575.00
Above camera furnished with mechanism for vertical and horizontal lens board movements from rear of camera—additional price \$75.00.		

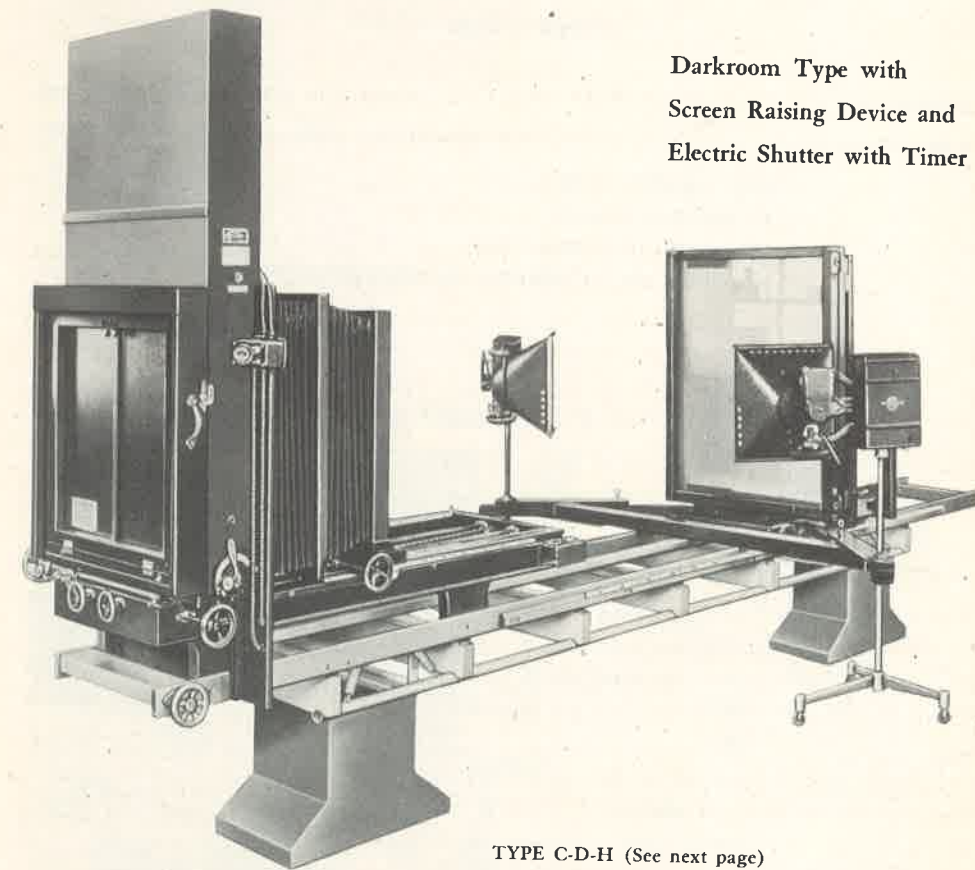
†Larger size copy board can be furnished at an additional charge.

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

ROBERTSON DARKROOM CAMERA

Darkroom Type with
Screen Raising Device and
Electric Shutter with Timer



TYPE C-D-H (See next page)

This new model Robertson Camera is of most modern construction.

The focusing is done with scales which eliminates the use of ground glass in focusing. This system gives the most accurate reproduction and the focusing is done more quickly than with the old type Cameras.

This Camera is built so that lens board movements are carried on either from the front or rear of Camera. Screen holding bars are equipped with mechanism for adjusting screen and for holding circular screens.

Included with the Camera is a new type holder which can be used for holding either film or plates. A glass covered copy board of the tilting type is furnished with the camera.

The operator does not have to carry plate holder.

All the movements of copy board and lens can be made from inside the darkroom, consequently, the focusing can be done either inside or outside the darkroom. The parts for closing up hole in darkroom wall are supplied with camera.

Camera is equipped with Micro Stop to register focus of halftones to be the same as line work. Illustration shows lamp brackets and screen raising device attached to camera.

The screen raising and lowering is done by the use of a motor which is started by pressing the button on the outside of case.

This type camera is exceptionally fast operating.

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

ROBERTSON DARKROOM CAMERA

Type C-D-H

ROBERTSON TYPE C-D-H CAMERA is the C-D Camera with screen raising device and attachments, price of C-D Camera given below, attachments extra, usual attachments are:

SCREEN RAISING DEVICE
VACUUM FILM HOLDER
LAMP BRACKETS (FLOOR TYPE)
R. R. ROBERTSON AUTOMATIC DIAPHRAGM CONTROL

ROBERTSON, TYPE C-D, DARK ROOM CAMERA (standard), complete with stand, scale focusing system, proportioning scale, combination plate holder for plates or film and tilting type glass covered copy board:

14" with 20 x 24" glass covered copy board and 12' stand*	\$ 850.00
20" with 30 x 34" glass covered copy board and 16' stand*	1,050.00
24" with 30 x 40" glass covered copy board and 16' stand*	1,100.00
31" with 34 x 44" glass covered copy board and 18' stand*	1,500.00
36" with 40 x 50" glass covered copy board and 18' stand*	1,750.00
40" with 40 x 50" glass covered copy board and 20' stand*	2,000.00

*Larger size copy boards can be furnished at a slight additional charge, and length of stand can be changed, if desired, but standard lengths are indicated above.
Larger size cameras, prices on application.

SCREEN RAISING DEVICE WHEN ORDERED WITH CAMERA

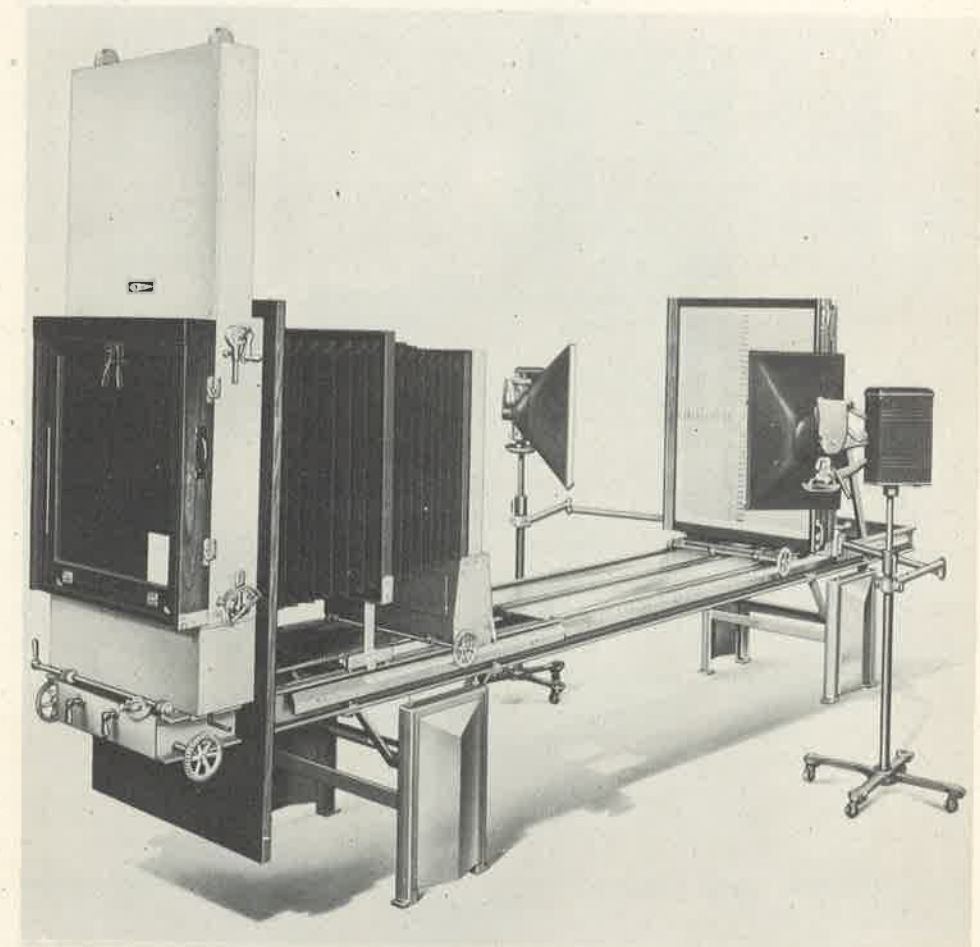
20" Screen Raising Device.....	\$250.00	Vacuum Film Holder.....	\$300.00
24" Screen Raising Device.....	250.00	Vacuum Film Holder.....	300.00
31" Screen Raising Device.....	350.00	Vacuum Film Holder.....	375.00
36" Screen Raising Device.....	400.00	Vacuum Film Holder.....	550.00
40" Screen Raising Device.....	450.00	Vacuum Film Holder.....	600.00
Floor Type Lamp Brackets.....	90.00		
R. R. Robertson Automatic Diaphragm Control.....	320.00		

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

ROBERTSON ALL-METAL DARKROOM CAMERA Darkroom Type with Screen Raising Device, Lamp Brackets, and Electric Shutter with Timer

Type S-E



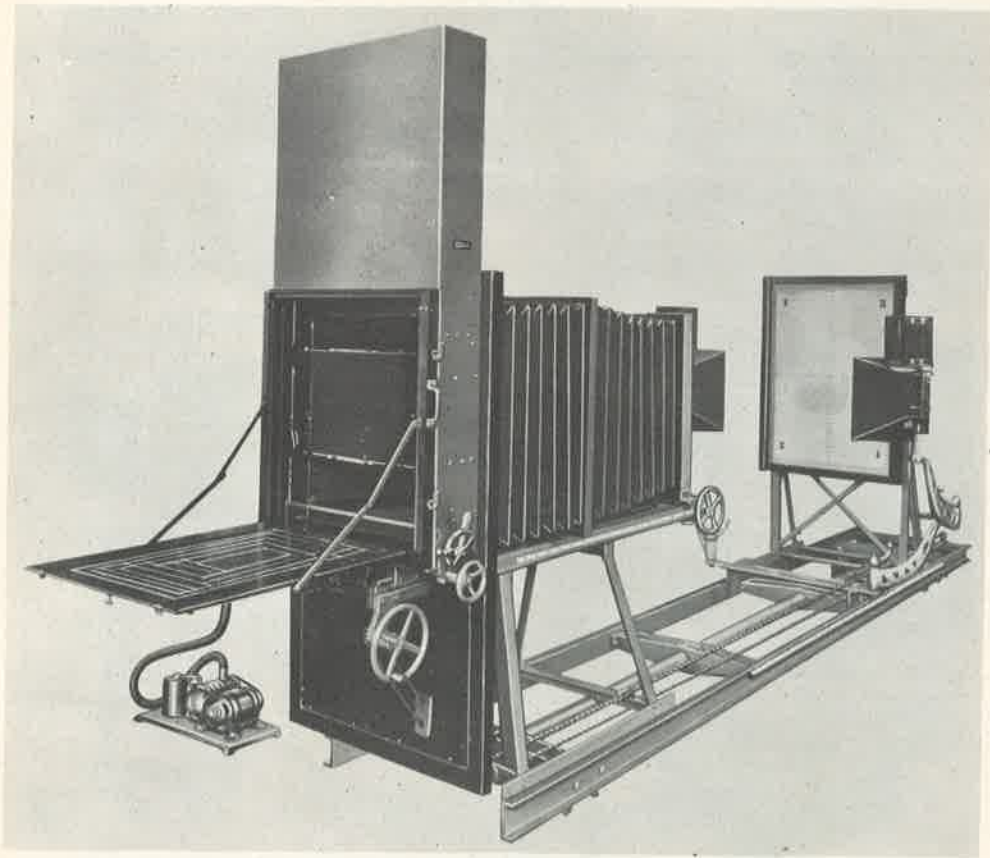
NEW TYPE CAMERA

ROBERTSON, NEW TYPE S-E, ALL METAL DARK ROOM PRECISION CAMERA, with screen raising device, complete with stand, scale focusing system, proportioning scale, combination plate holder for plates or film and tilting type 30"x 40" glass covered copy board and lamp brackets.

24" size only	\$1,900.00
Attachment listed below can be used on this camera.	
Vacuum Film Holder	300.00
Robertson Automatic Diaphragm Control	320.00

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ROBERTSON DARKROOM CAMERA
With Screen Raising Device and Vacuum Film Holder
Type M-D-H



ROBERTSON Metal Darkroom Camera with screen raising device and vacuum film holder.

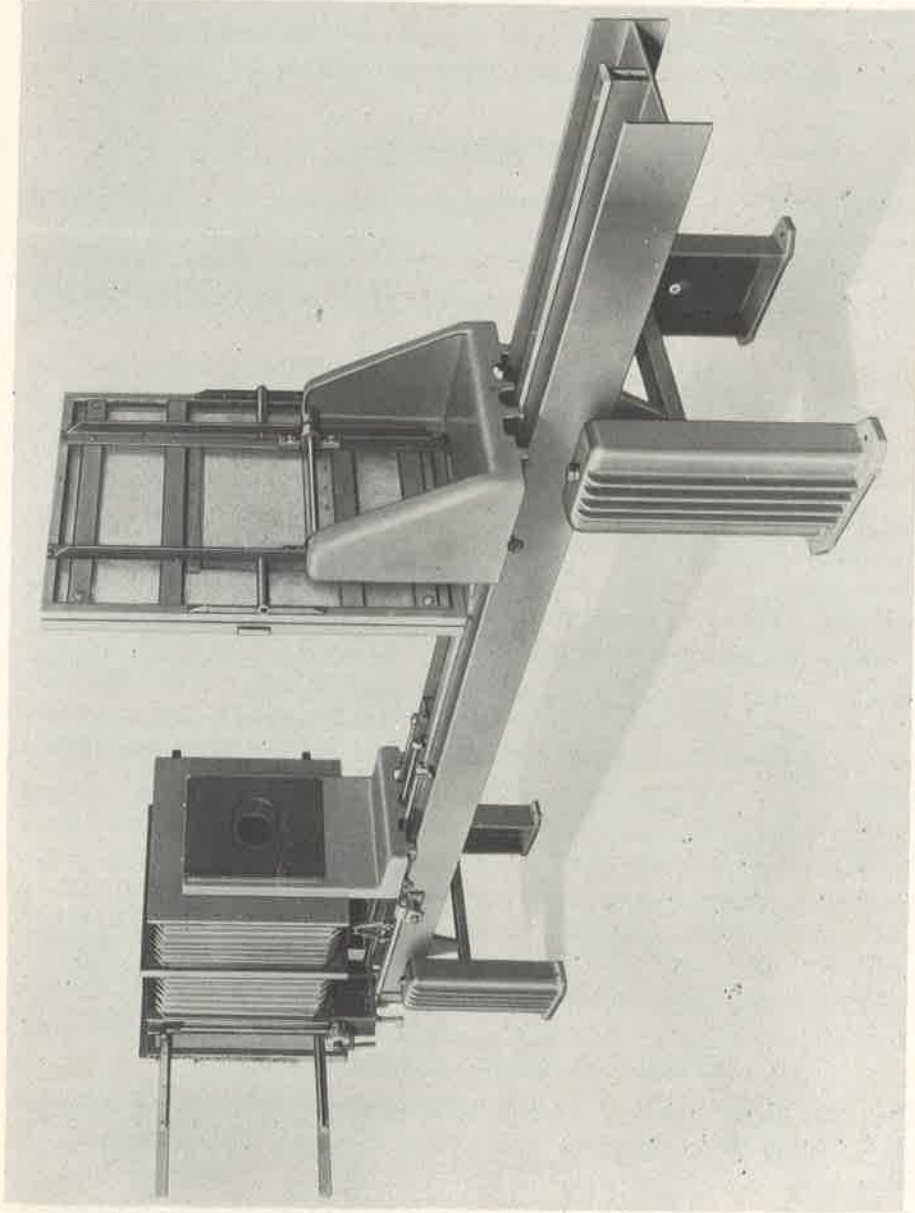
ROBERTSON, TYPE M-D-H, ALL METAL DARK ROOM CAMERA, complete with SCREEN RAISING DEVICE, VACUUM FILM HOLDER, including stand, scale focusing system, proportioning scale, combination holder for plates or film and tilting type copy board:

20" with 15' stand and 30x40" copy board*	\$2,975.00
24" with 15' stand and 30x40" copy board*	3,130.00
31" with 17' stand and 34x44" copy board*	4,265.00

*Glass covered copy board can be furnished at an additional charge, and length of stand can be changed to meet customer's requirements.

LAMP BRACKETS for moving arc lamps with copy board for Robertson metal camera.....\$200.00 pr.

Over Fifty Years of Service to the Graphic Arts



KOPPE ALL-METAL STANDARD DARKROOM CAMERA
The above basic design applies to all Koppe All-Metal Darkroom Cameras built to date, and described on the following pages.

Over Fifty Years of Service to the Graphic Arts

KOPPE ALL-METAL STANDARD DARKROOM CAMERA

Built in two sizes, Type SLA, size 24 x 24 inches, provided with 14' 10" stand and Type SLB, size 34 x 34 inches, with 16' stand. Designed for dark room operation in the production of negatives for photo-lithography, photo-engraving and photo-gravure work.

COMPLETE DESCRIPTION

Camera Stand: The rigid single unit streamline stand is a complete departure from old conventional design. All surfaces are accurately machined, thus assuring perfect alignment between lensboard and copyboard carriages and surface of image holder. Vibration is absorbed by mounting camera and stand on suspension springs arranged to allow freedom of movement in any direction.

Screen Housing: Rails are mounted on screen adjusting mechanism on which screen and carrier are moved from operating position to screen storage cabinets mounted on carrier rails on each side of camera. Screen carrier furnished with camera will handle circular or rectangular screens.

Film Holder: Frame is constructed of rectangular metal tubing provided with 1/4" plate glass. The frame is held by hinges to screen housing and arranged to drop to horizontal position for mounting film on glass plate which is provided with Stay-flat coating applied by the operator. This coating also serves as a ground glass for focusing image. The metal frame is latched to screen housing by means of positive hinged locking device.

Lensboard: Two-way movement of lensboard is controlled from back of camera in dark room. Lensboard panel designed to prevent light leakage. A removable plate is provided for mounting lens ring. Carriage and lensboard frame is cast in a single unit. Positive locking device is provided to prevent accidental displacement of carriage.

Copyboard: The metal framework is rigidly constructed on which a glass cover plate is mounted. Frame is arranged to tilt from vertical to horizontal position for loading. Copy is held flat by means of spring compensating back provided with felt pad. Copy is held flat and parallel with film holder. Copyboard carriage arranged to move entire length of camera stand. Positive locking means is provided to secure carriage in fixed position. Movement of copyboard carriage control from dark room.

BELLOWS: Two sections of bellows and bellows carrier are provided as standard equipment. Bellows and carrier frame can be quickly removed or replaced.

Automatic Focusing: Automatic focusing is accomplished by means of accurately calibrated focusing dials, permitting rapid setting of camera for enlargements and reductions.

Proportional Slide Rule and Packard Shutter provided with camera as standard equipment.

KOPPE ALL-METAL STANDARD DARKROOM CAMERA

PRICE	TYPE SLA	TYPE SLB
All-Metal Standard Camera and Equipment listed above, F.O.B. Clinton, Iowa	\$1,925.00	\$2,520.00
2 days services of erector	50.00	50.00
	\$1,975.00	\$2,570.00
Plus traveling expenses of erector from Clinton, Iowa, to destination and return.		
NOTE: Lens, screen and arc lamps are not included in price.		
Maximum lensboard extension Type SLA Camera 72" from image surface to lensboard.		
Maximum lensboard extension Type SLB Camera 84" from image surface to lensboard.		
CALIBRATION of dials when lens is furnished by customer — \$75.00.		
19" LENS, including Federal Excise Tax	264.50	
24" LENS, including Federal Excise Tax		364.50

MISCELLANEOUS ACCESSORY ITEMS

DOUTHITT DIAPHRAGM CONTROL SYSTEM	\$265.00	\$265.00
KINZLER DIAPHRAGM CONTROL SYSTEM	95.00	95.00
ADDITIONAL PACKED SHUTTER	10.00	10.00
TIMING DEVICE, for operating Shutter with Automatic Control for Arc Lamps (Exposure time 3 seconds to 150 seconds)	95.00	95.00
ELECTRICALLY OPERATED PNEUMATIC SHUTTER CONTROL	50.00	50.00
FLASH LAMP (Manual Operation)	65.00	65.00
BELLOWS SECTION AND BELLOWS CARRIER, for additional enlargement	80.00	90.00
LENS SCREW EXTENSION, for additional enlargement	35.00	35.00
MURPHY MONORAIL LAMPCARRIER	245.00	265.00

CAMERA ACCESSORY ITEMS

ADDITIONAL SCREEN CARRIER	\$170.00	\$190.00
SCREEN ELEVATING MECHANISM	350.00**	400.00**
SUCTION FILM HOLDER, provided with Spencer-Turbo Suction Pump and 1 HP AC 110-220 Volt Motor	540.00*	615.00*
Equipped with DC Motor	565.00*	645.00*
FOOT OPERATED SWITCH	15.00	15.00
DROP BACK STAY-FLAT HOLDER, with adjustable plate rails and plate guide	250.00	270.00
SWINGING FRAME provided with plate rails and etched ground glass with 1" square clear center area and clear diagonal lines	200.00	225.00
SWINGING GROUND GLASS HOLDER, provided with etched ground glass with 1" square clear center area and clear diagonal lines	150.00	175.00

ACCESSORY ITEMS FOR COPYBOARD

COPYBOARD TRANSPARENCY HOLDER, size 12 x 18	\$75.00	\$75.00
WOOD COPYBOARD, size 36 x 44	85.00	
WOOD COPYBOARD, size 40 x 50		95.00

(Prices include bar for mounting board on copyboard carriage.)

NOTE: Glass Covered Tilting Copyboard with opening for transparency holder must be ordered with camera and equipped at the factory.

* Prices include allowance for Stay-flat Film Holder.

** Prices include allowance for Horizontal Screen Rails.

KOPPE ALL-METAL PRECISION PROCESS CAMERA

Built in two sizes, Type CLA, size 24 x 24 inches, provided with 14' 10" stand and Type CLB, size 36 x 36 inches, with 18' stand. Designed for dark room operation in the production of negatives for photo-lithography, photo-engraving and photo-gravure.

COMPLETE DESCRIPTION

Camera Stand: The rigid single unit streamline stand is a complete departure from old conventional design. All surfaces are accurately machined, thus assuring perfect alignment between lensboard and copyboard carriages and surface of image holder. Vibration is absorbed by mounting camera and stand on suspension springs arranged to allow freedom of movement in any direction.

Screen Housing: Rails are mounted on screen adjusting mechanism on which screen and carrier are moved from operating position to screen storage cabinets mounted on carrier rails on each side of camera. Screen carrier furnished with camera will handle circular or rectangular screens.

Film Holder: Frame is constructed of rectangular metal tubing provided with negative rails and supporting bars for holding glass plates. The frame is held by hinges to screen housing and arranged to swing to operating position for focussing image on ground glass. The metal frame is latched to screen housing by means of positive locking device.

Lensboard: Two-way movement of lensboard is controlled from back of camera in dark room. Lensboard panel designed to prevent light leakage. A removable plate is provided for mounting lens ring. Carriage device is provided to prevent accidental displacement of carriage.

Copyboard: The metal framework is rigidly constructed on which a glass cover plate is mounted. Frame is mounted in back of positive holder and arranged to tilt from vertical to horizontal position for loading. Copy is held flat by means of spring compensating back provided with felt pad. Copy is held flat and parallel with film holder. Copyboard carriage arranged to move entire length of camera stand. Positive locking means is provided to secure carriage in fixed position. Movement of copyboard carriage control from dark room.

Positive Holder: A frame constructed of rectangular metal tubing is mounted on copyboard carriage and provided with adjustable plate rails. Frame is arranged to oscillate and a wooden copyboard is furnished as standard equipment. Board is provided with cleats for mounting on frame on positive holder.

Bellows: Two sections of bellows and bellows carrier are provided as standard equipment. Bellows and carrier frame can be quickly removed or replaced.

Automatic Focusing: Automatic focusing is accomplished by means of accurately calibrated focusing dials, permitting rapid setting of camera for enlargements and reductions.

Proportional Slide Rule and Packard Shutter provided with camera as standard equipment.

Over Fifty Years of Service to the Graphic Arts

KOPPE ALL-METAL PRECISION PROCESS CAMERA

PRICE	TYPE CLA	TYPE CLB
All-Metal Precision Process Camera and equipment listed above, F.O.B.		
Clinton, Iowa	\$2,965.00	\$3,625.00
2 days service of erector	50.00	50.00
	\$3,015.00	\$3,675.00
Plus traveling expenses of erector from Clinton, Iowa, to destination and return.		

NOTE: Lens, screen and arc lamps are not included in price.

MAXIMUM LENSBOARD extension Type CLA Camera
72" from image surface to lensboard.

MAXIMUM LENSBOARD extension Type CLB Camera
84" from image surface to lensboard.

CALIBRATION of dials when lens is furnished by customer — \$75.00.

19" LENS, including Federal Excise Tax	264.50	
24" LENS, including Federal Excise Tax		364.50

MISCELLANEOUS ACCESSORY ITEMS

DOUTHITT DIAPHRAGM CONTROL SYSTEM	\$265.00	\$265.00
KINZLER DIAPHRAGM CONTROL SYSTEM	95.00	95.00
ADDITIONAL PACKARD SHUTTER	10.00	10.00
TIMING DEVICE for operating shutter (Exposure time 3 seconds to 150 seconds)	95.00	95.00
ELECTRICALLY OPERATED PNEUMATIC SHUTTER CONTROL	50.00	50.00
FLASH LAMP (Manual Operation)	65.00	65.00
BELLOWS SECTION AND BELLOWS CARRIER for additional enlargement	80.00	90.00
LENS SCREW EXTENSION for additional enlargement	35.00	40.00
MURPHY MONORAIL LAMP CARRIER	245.00	265.00

CAMERA ACCESSORY ITEMS

ADDITIONAL SCREEN CARRIER	\$170.00	\$190.00
SCREEN ELEVATING MECHANISM	350.00**	400.00**
SUCTION FILM HOLDER provided with Spencer-Turbo Suction Pump and 1 HP A.C. 110-120 Volt Motor	540.00*	615.00*
Equipped with D. C. Motor	565.00*	645.00*
FOOT OPERATED SWITCH	15.00	15.00
SWINGING GROUND GLASS HOLDER, provided with etched ground glass with 1" square clear center area and clear diagonal lines	150.00	175.00

* Prices include allowance for film holder and negative plate rails.

** Prices include allowance for horizontal screen rails.

Over Fifty Years of Service to the Graphic Arts

KOPPE ALL-METAL PRECISION COLOR-PROCESS CAMERA

Built in two sizes, Type MLA, size 24 x 24 inches, provided with 14' 10" stand and Type MLB, size 36 x 36 inches, with 16' stand. Designed for dark room operation in the production of negatives for photo-lithography, photo-engraving and photo-gravure work.

COMPLETE DESCRIPTION

Camera Stand: The rigid single unit streamline stand is a complete departure from old conventional design. All surfaces are accurately machined, thus assuring perfect alignment between lensboard and copyboard carriages and surface of image holder. Vibration is absorbed by mounting camera and stand on suspension springs arranged to allow freedom of movement in any direction.

Screen Housing: Rails are mounted on screen adjusting mechanism on which screen and carrier are moved from operating position to screen storage cabinets mounted on carrier rails on each side of camera. Screen carrier furnished with camera will handle circular or rectangular screens.

Negative Plate Rails: Plate rails and plate guide are mounted on supporting bars provided with feed screw for imparting vertical adjustment of negative rails.

Lensboard: Two-way movement of lensboard is controlled from back of camera in dark room. Lensboard panel designed to prevent light leakage. A removable plate is provided for mounting lens ring. Carriage and lensboard frame is cast in a single unit. Positive locking device is provided to prevent accidental displacement of carriage.

Copyboard: The metal framework is rigidly constructed on which a glass cover plate is mounted. Frame is mounted in back of positive holder and arranged to tilt from vertical to horizontal position for loading. Copy is held flat by means of spring compensating back provided with felt pad. Copy is held flat and parallel with film holder. Copyboard carriage arranged to move entire length of camera stand. Positive locking means is provided to secure carriage in fixed position. Movement of copyboard carriage control from dark room.

Positive Holder: A frame constructed of rectangular metal tubing is mounted on copyboard carriage and provided with adjustable plate rails. Frame is arranged to oscillate and a wooden copyboard is furnished as standard equipment. Board is provided with cleats for mounting on frame on positive holder.

Bellows: Two sections of bellows and bellows carrier are provided as standard equipment. Bellows and carrier frame can be quickly removed or replaced.

Automatic Focusing: Automatic focusing is accomplished by means of accurately calibrated focusing dials, permitting rapid setting of camera for enlargements and reductions.

Proportional Slide Rule and Packard Shutter provided with camera as standard equipment.

KOPPE ALL-METAL PRECISION COLOR-PROCESS CAMERA

PRICE:	TYPE MLA	TYPE MLB
All-Metal Precision Color-Process Camera and equipment listed above,		
F.O.B. Clinton, Iowa	\$3,460.00	\$4,175.00
2 days services of erector	50.00	50.00
	\$3,510.00	\$4,225.00
Plus traveling expenses of erector from Clinton, Iowa, to destination and return.		
NOTE: Lens, screen and arc lamps are not included in price.		
Maximum lensboard extension Type MLA Camera		
72" from image surface to lensboard		
Maximum lensboard extension Type MLB Camera		
84" from image surface to lensboard		
CALIBRATION of dials when lens is furnished by customer — \$75.00.		
19" LENS, including Federal Excise Tax	264.50	
24" LENS, including Federal Excise Tax		364.50

MISCELLANEOUS ACCESSORY ITEMS

DOUTHITT DIAPHRAGM CONTROL SYSTEM	\$245.00	\$245.00
KINZLER DIAPHRAGM CONTROL SYSTEM	95.00	95.00
ADDITIONAL PACKARD SHUTTER	10.00	10.00
TIME DEVICE for operating shutter (Exposure time 3 seconds to 150 seconds)	95.00	95.00
ELECTRICALLY OPERATED PNEUMATIC SHUTTER CONTROL	50.00	50.00
FLASH LAMP (Manual Operation)	65.00	65.00
BELLOWS SECTION AND BELLOWS CARRIER for additional enlargement	80.00	90.00
LENS SCREW EXTENSION for additional enlargement	35.00	40.00
MONORAIL LAMP CARRIER (MURPHY)	245.00	265.00

CAMERA ACCESSORY ITEMS

ADDITIONAL SCREEN CARRIER	\$170.00	\$190.00
SCREEN ELEVATING MECHANISM	350.00*	400.00*
SUCTION FILM HOLDER provided with Spencer-Turbo Suction Pump and 1 HP A. C. 110-220 Volt Motor	540.00*	615.00*
Equipped with D. C. Motor	565.00*	645.00*
FOOT OPERATED SWITCH	15.00	15.00
SWINGING GROUND GLASS HOLDER provided with etched ground glass with 1" square clear center area and clear diagonal lines	150.00	175.00

* Prices include allowance for horizontal screen rails.

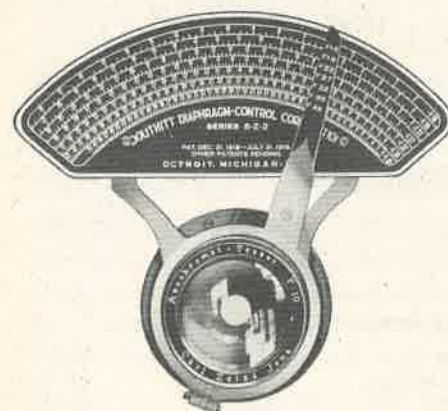
THE DOUTHITT DIAPHRAGM CONTROL

The Diaphragm Control is an instrument designed to unite in perfect balance all the optical factors that enter into the production of half-tone negatives. By showing the position to place the screen so that it will be in harmony with the stops that it is desired to use, and in turn to show the exposure time that will be in harmony with these factors.

It becomes possible to produce negatives by the use of this instrument off any desired contrast, irrespective of the contrast in the copy.

The Diaphragm Control consists of a number of different parts, the principal parts being the Camera Scale, the Lens Scale, Camera Scale Charts and the Rotating Flash Stop.

The Camera Scale is an instrument designed to register the bellows extension in key numbers on the Charts when placed on the Scale, and when the chart of any screen is changed on the scale for that of another screen, the key numbers automatically change, showing all control factors with that screen in balance with the first.



Complete Diaphragm Control attached to lens,	
Camera Scale and parts	\$250.00
Items when purchased separate, Lens Scale,	
Indicator and Flash Stop attached to lens	100.00
Rotating Flash Stop	15.00
Screen Separation Gauges, per set	5.00
Replacement Screen Charts, each	2.50
Replacement Lens Scale	12.50
Control Reel Only	100.00

It is necessary to send the lens to our factory to be calibrated and equipped. When ordering Rotating Flash Stops give make, style or type and focal length of lens, or send sample or sketch with center indicated. Subject to Federal Excise Tax.

CAMERA FLASHING LAMP FOR HALFTONE NEGATIVES BLACK AND WHITE OR COLOR

Provides smooth, even lighting and assures clean, sharp, uniform dot structure over entire plate area. Subject to Federal Excise Tax.

PRICE \$35.00

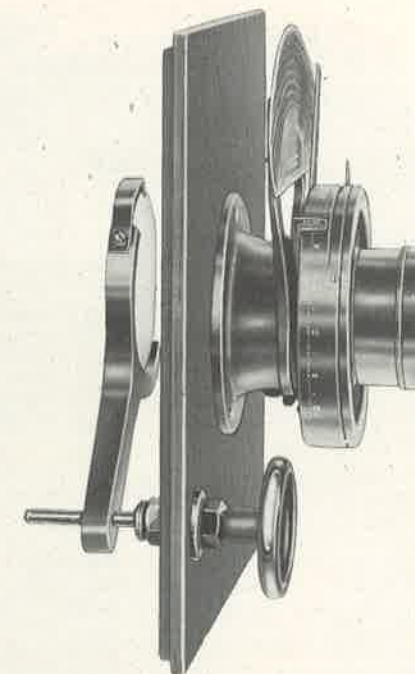


Over Fifty Years of Service to the Graphic Arts

THE DOUTHITT SCREEN COMPENSATOR

For making combination line and halftone negatives in perfect register, without inserting large size refractive glass or manipulating the camera.

— PATENTED —



Compensates for the refraction of the light through the screen. Assures same size image with and without the halftone screen.

— PATENTED —

The compensator is attached to the lens board by drilling a 1/2" hole in the proper place to center the compensator at the rear of the lens. It is then moved into and out of the lens range by turning the small wheel in front of the lens board.

When using the screen the light does not travel on a straight line from the lens to the outer margin of the negative, but is refracted or bent by the screen and leaves the screen at a lesser angular degree, thereby making the negative smaller in size than would be the case if the screen were not used.

In order to make both line and halftone negatives the same size, (or to register) a refractive glass similar to the screen must be used when making the line negative.

This is the object of the Douthitt Compensator and after being attached to the camera makes this operation simplicity itself.

The compensator may also be used for highlighting the halftone negative by removing the screen and then exposing through the compensator and giving a slight exposure with a stop slightly smaller than the regular highlight stop.

PRICE \$22.50

Subject to Federal Excise Tax.

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ROBERTSON FILM CABINET WITH CUTTER



This is a convenient way of handling films, the two upper drawers have partitions in the center for storing small films.

Above the film in each drawer is a plate to keep light out in case a drawer is opened by mistake. The lower part of cabinet is used for storage. On top of cabinet is a cutter with cutting board divided in inches.

ROBERTSON FILM CABINET WITH CUTTER. Construction changed in 1946, having compartments to take film up to 20 x 24"\$160.00

Over Fifty Years of Service to the Graphic Arts

ROBERTSON FILM AND PAPER CUTTER

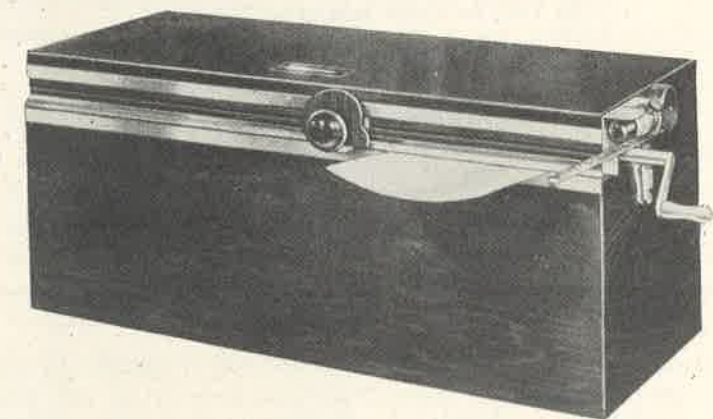


Illustration shows narrow roll film being cut

This Robertson Film and Paper Cutter is made to hold roll film or paper and is an exceptionally fine way of handling film or paper rolls.

This container is light tight. After the film or paper has been received, the roll is unwrapped and put on the shaft in the cutter and the film or paper is completely used without opening the cutter or handling the roll again.

The film is rolled out by turning the handle and measured to any desired length, by the use of the tape attached to the container. The film or paper is then cut off by the cutting knife which cuts in either direction and the balance of roll is left in the container in the dark.

The container has a red light for darkroom use.

This container saves considerable time in handling the rolls and keeps the film or paper clean and free from finger prints, and it is adjustable to take any size roll up to the full size of the container.

ROBERTSON FILM & PAPER CUTTER to hold roll film or paper:

20"	\$ 90.00
42"	130.00
Double Compartment to accommodate one roll of film or paper 9½" and one 13"	100.00

Over Fifty Years of Service to the Graphic Arts

LENSES

GOERZ APOCHROMAT ARTAR
(The Lens for Color Separation Negatives)
f:9 to f:16

Designed to meet the special requirements of the lithographer and photo-engraver for color separation and black and white reproduction of flat surface designs.

The Artar is truly "apochromatic," which means that a very high degree of correction has been attained in this lens for the various color bands over the entire visible spectrum. The Artar not only produces through the various color filters images of equal sharpness at the same focal plane, but the negatives are also of exactly the same size so that perfectly superimposing printing plates result in the finishing process.

The standard barrels of the Artar series are fitted with iris diaphragm and have an additional slot for the insertion of special Waterhouse stops or the thin gelatine color filters. We make special metal holders to facilitate the handling of the gelatine filters.

GOERZ APOCHROMAT ARTAR LENSES

Focal Length		Plate Size 1/2 Reduct	In Iris Diaphragm and Filter Slot Barrel	In Regular Iris Diaphragm Barrel
Inches		Inches		
F9.....	4	2 1/2 x 3 1/2	\$66.00	\$54.00
F9.....	6	4 x 5	75.00	65.00
F9.....	9 1/2	6 1/2 x 8 1/2	144.00	132.00
F9.....	12	8 x 10	.....	145.00
F9.....	14	10 x 12	153.00	.....
F9.5.....	16 1/2	11 x 14	180.00	.....
F11.....	19	14 x 17	207.00	.....
F11.....	24	18 x 20	222.00	.....
F12.5.....	30	22 x 26	315.00	.....
F12.5.....	35	24 x 32	420.00	.....
F14.....	42	32 x 36	600.00	.....
F15.....	47 1/2	36 x 40	780.00	.....

Artar 4" and 6" intended for color separation blow-ups from 35 mm. and larger kodachrome.

Over Fifty Years of Service to the Graphic Arts

GOERZ GOTAR ANASTIGMAT
f:6.8 f:8 f:10

For black and white work, process work and for copying and enlarging maps or for reproduction of the finest detail in any other flat surface design.

The barrels for 8 1/4, 10 and 12" lenses are of the standard iris diaphragm type. The longer focal length lenses have in addition to the iris diaphragm a slot for the insertion of gelatine filters. We make special metal holders for such filters.

GOERZ GOTAR LENSES

Focal Length		Plate Size for Infinity	In Iris Diaphragm and Filter Slot Barrel
Inches		Inches	
F6.8.....	8 1/4	5 x 7	\$90.00
F8.....	10	6 1/2 x 8 1/2	117.00
F8.....	12	8 x 10	120.00
F8.....	14	10 x 12	177.00
F8.....	16 1/2	11 x 14	219.00
F8.....	19	12 x 16	252.00
F10.....	24	14 x 17	275.00

GOERZ REVERSING PRISMS

Certain reproduction process demand reversed negatives to avoid stripping the film. This reversal is obtained in the negative by placing a right angle prism on the lens, usually at the front. No lens can work to any higher accuracy than the prism with which it is used.

Goerz Prisms are noted for their accuracy, and are of the same high quality as the lenses with which they are to be used. We cannot guarantee the efficiency of Goerz photoengraving lenses if they are used with prisms of inferior quality.

A rotating mounting allows the setting of the face off the prism at any desired position, sideways, downward or upward and the substantial mounting assures a correct 90° deviation of the optical axis. The prism fits the thread on the front cell when the lens hood is unscrewed.

The sizes which we list for our various lenses will take care of the ordinary demands for reproduction work to same size and for reduction. Oversize prisms will not increase the angular field of the lens.

GOERZ PHOTO-ENGRAVING PRISMS

Length of Square Face	Size Suitable For		Fitted to Our Lens
	ARTAR	GOTAR	
2 3/8"	9 1/2", 12" & 14"	12"	\$162.00
2 7/8"	16 1/2" & 19"	14"	243.00
3 1/4"	24"	16 1/2"	279.00
3 3/4"	30"	19" & 24"	312.00
3 3/4"	35"	.....	330.00
5"	42" & 47 1/2"	.....	648.00

We can fit these prisms to other makes of lenses.

Over Fifty Years of Service to the Graphic Arts

LEVY STANDARD ENGRAVED SCREENS

Size in Inches	Rectangular Screens						
	LINES PER INCH						
	85 or Less	100	110 or 120	125 or 133	140 or 150	166 or 175	200
5 x 7	\$ 18.00	\$ 20.00	\$ 22.00	\$ 25.00	\$ 30.00	\$ 40.00	\$ 50.00
6 x 8	30.00	32.00	36.00	40.00	46.00	55.00	68.00
7 x 9	40.00	42.00	48.00	56.00	65.00	80.00	110.00
8 x 10	50.00	55.00	66.00	74.00	84.00	110.00	136.00
9 x 11	56.00	66.00	86.00	92.00	110.00	140.00	158.00
10 x 12	64.00	80.00	110.00	126.00	148.00	174.00	210.00
11 x 14	95.00	126.00	154.00	180.00	208.00	250.00	318.00
12 x 15	112.00	150.00	182.00	216.00	258.00	310.00	354.00
13 x 16	145.00	182.00	220.00	262.00	316.00	368.00	440.00
14 x 17	180.00	226.00	260.00	316.00	384.00	440.00	530.00
15 x 18	206.00	260.00	300.00	374.00	456.00	536.00	640.00
16 x 20	255.00	320.00	365.00	460.00	542.00	644.00	780.00
17 x 21	290.00	360.00	410.00	515.00	614.00	730.00	895.00
18 x 22	330.00	410.00	470.00	590.00	690.00	830.00	1,030.00
20 x 24	400.00	480.00	560.00	700.00	820.00	1,020.00	....

Size listed is working area. Overall size is 1/2 inch larger in width and in length.
Screens larger than those listed, or of different dimensions than those shown, will be made to order in any ruling; prices quoted on application.

LEVY STANDARD ENGRAVED SCREENS

Diameter Inches	Plate Covered	Circular Screens					
		LINES PER INCH					
		85 or Less	100	110 or 120	133	150	166 or 175
13 1/2	8 x 10	\$140.00	\$150.00	\$176.00	\$190.00	\$216.00	\$270.00
15	9 x 11	160.00	168.00	216.00	232.00	268.00	320.00
16 1/2	10 x 12	170.00	205.00	260.00	304.00	356.00	415.00
19 1/2	12 x 15	256.00	334.00	410.00	472.00	564.00	670.00
21	13 x 16	328.00	410.00	484.00	580.00	692.00	784.00
22 1/2	14 x 17	405.00	492.00	565.00	690.00	822.00	935.00
23 1/2	15 x 18	440.00	548.00	624.00	754.00	920.00	1,066.00
24	15 x 18	470.00	580.00	660.00	802.00	980.00	1,138.00
27 1/2	17 x 21	640.00	788.00	884.00	1,095.00	1,306.00	1,540.00
29	18 x 22	720.00	890.00	998.00	1,246.00	1,468.00	1,745.00
31 1/2	20 x 24	850.00	1,034.00	1,190.00	1,480.00	1,720.00	2,150.00
34	21 x 26	960.00	1,195.00	1,370.00	1,700.00	1,995.00	....
38	25 x 28	1,280.00	1,550.00	1,760.00	2,172.00	2,530.00	....
40	26 x 30	1,370.00	1,670.00	1,885.00	2,380.00	2,720.00	....
44	28 x 34	1,680.00	1,990.00	2,240.00	2,850.00	3,340.00	....

On circular screens the working area is 3/16 inch less than the listed diameter.
We list the sizes and rulings of Circular Screens in general use. Screens of any diameter up to 58", and ruled any desired number of lines per inch, can be made to order; prices quoted on application.

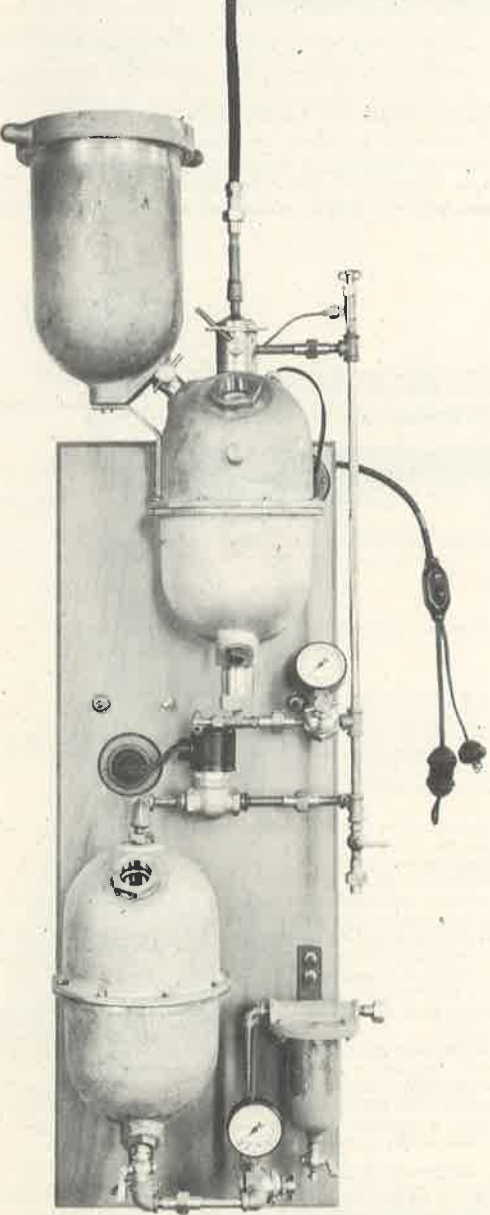
ALUMINUM ROTARY HOLDERS FOR CIRCULAR SCREENS

Diameter of Screen Inches	Outside Dimensions of Holder		Price	Diameter of Screen Inches	Outside Dimensions of Holder		Price
13 1/2	14 1/2 x 14 1/2		\$35.00	27 1/2	29 1/2 x 29 1/2		\$60.00
15	16 x 16		35.00	29	31 x 31		70.00
16 1/2	17 1/2 x 17 1/2		35.00	31 1/2	33 1/2 x 33 1/2		75.00
19 1/2	20 1/2 x 20 1/2		40.00	34	36 x 36		85.00
21	22 x 22		50.00	38	40 x 40		95.00
22 1/2	23 1/2 x 23 1/2		55.00	40	42 x 42		110.00
23 1/2	24 1/2 x 24 1/2		55.00	44	46 x 46		120.00
24	25 x 25		55.00				

Prices are F.O.B. factory and include packing.

Over Fifty Years of Service to the Graphic Arts

THE CRAIG DRI-SPRAY



A new and desirable non-offset spray, the result of years of scientific research and development, sprays a dry powder and operates on very low air pressure. It is easy to install and operate, requires no floor space, has no moving parts, will not "clog" or "choke" and is efficient, economical, compact and durable.

No wet or liquid spray material is used, consequently NO FOG OR MIST IS CREATED. Mess, dirt and stickiness are eliminated. Exhaust or ventilating equipment is not required and the maintenance and repair work necessary in other methods of spraying are avoided.

A fine dry powder, specially formulated and analytically tested, is applied close to the sheet without floatation—creating no hazard or occupational illness. One pound of Dri-Spray Powder will go further than one gallon of wet spray mix.

Heavy forms, multi-color and process printing, gloss inks and press varnish, can be run without offset, sticking, or picking. Slip-sheeting is unnecessary. Any number of impressions can be superimposed on previously Dri-Sprayed sheets without filling up the plates or form or building up on rollers, which means a considerable saving in wash-up time.

Dri-Spray does not affect the printed sheet or leave it rough; never damages or batters plates or cuts; creates slip—NOT stick. "Winding" when now necessary is minimized. Larger piles can be stacked. Feeding is improved and jogging and handling are expedited. Paper waste and spoilage are reduced and because of the "slip" instead of "stick", production on folding and cutting machines is improved.

The method of operation is to inject perfectly dry air into powder contained in the lower half of the spray tank to create a cloud of powder laden air in the dome of the tank. This cloud of powder laden air is carried to the printed sheet through a small diameter spray tube placed transversely across the press delivery and as close to the printed sheet as the design of the delivery will permit. Because the pressure at the ports of the spray tube is only one ounce or less, there is no floatation of powder through the pressroom. The volume of powder required for the various types of printing is controlled by a single adjustment.

The operating medium of the Dri-Spray is compressed air from the supply available in the plant where the spray is installed. Because the air contacting the dry powder in the spray tank must be free from moisture to a relatively low dew point, a filter and dehydrator are included as standard equipment.

The Craig Dri-Spray can be used on all makes, styles and sizes of direct printing and lithographing presses, rotary or flatbed, web or sheet-fed, rewind or sheet deliveries including label, tag, envelope, ticket, decalcomania and photo-gelatine presses, as well as coating, varnishing, and special machines.

The selling price of the model P6 Dri-Spray f.o.b. our plant is \$470.00 with one spray tube for any standard make of offset press, or flat-bed or rotary direct printing press.

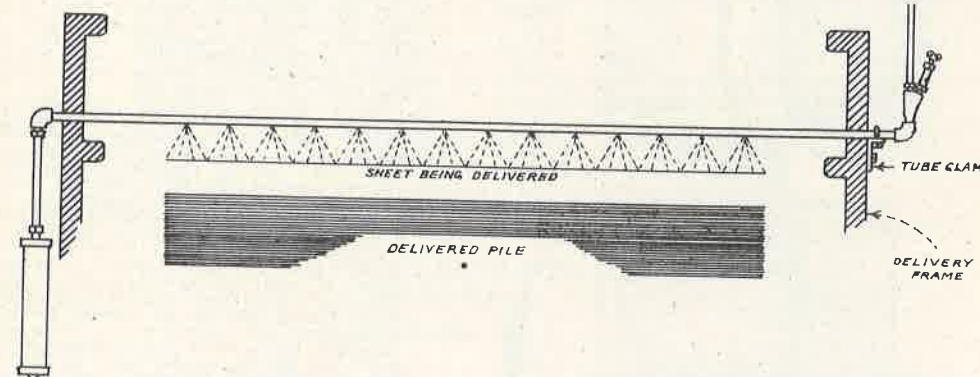
Craig Dri-Spray powder, packed in moisture proof containers, sells as follows f.o.b. our plant.

In 100 lb. drums	\$48 per lb.
In 50 lb. drums	.53 per lb.
In 25 lb. drums	.58 per lb.

Over Fifty Years of Service to the Graphic Arts

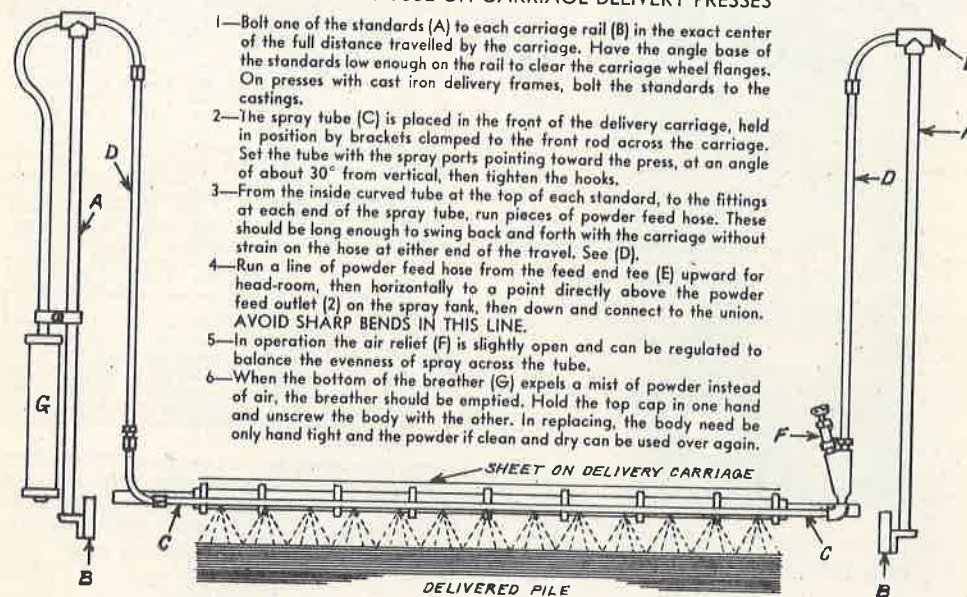
THE CRAIG DRI-SPRAY (continued)

ON CHAIN DELIVERY PRESSES — modern offsets and sheet-fed rotaries for example, the spray tube is placed crosswise the delivery between the upper and lower chain tracks and as close to the latter as the gripper bar mechanism will permit. Locate the tube about 12" back of the delivery pile when possible, with the tube ports pointing slightly downward and toward the pile.



TO PLACE SPRAY TUBE ON CARRIAGE DELIVERY PRESSES

- 1—Bolt one of the standards (A) to each carriage rail (B) in the exact center of the full distance travelled by the carriage. Have the angle base of the standards low enough on the rail to clear the carriage wheel flanges. On presses with cast iron delivery frames, bolt the standards to the castings.
- 2—The spray tube (C) is placed in the front of the delivery carriage, held in position by brackets clamped to the front rod across the carriage. Set the tube with the spray ports pointing toward the press, at an angle of about 30° from vertical, then tighten the hooks.
- 3—From the inside curved tube at the top of each standard, to the fittings at each end of the spray tube, run pieces of powder feed hose. These should be long enough to swing back and forth with the carriage without strain on the hose at either end of the travel. See (D).
- 4—Run a line of powder feed hose from the feed end tee (E) upward for head-room, then horizontally to a point directly above the powder feed outlet (2) on the spray tank, then down and connect to the union. AVOID SHARP BENDS IN THIS LINE.
- 5—In operation the air relief (F) is slightly open and can be regulated to balance the evenness of spray across the tube.
- 6—When the bottom of the breather (G) expels a mist of powder instead of air, the breather should be emptied. Hold the top cap in one hand and unscrew the body with the other. In replacing, the body need be only hand tight and the powder if clean and dry can be used over again.

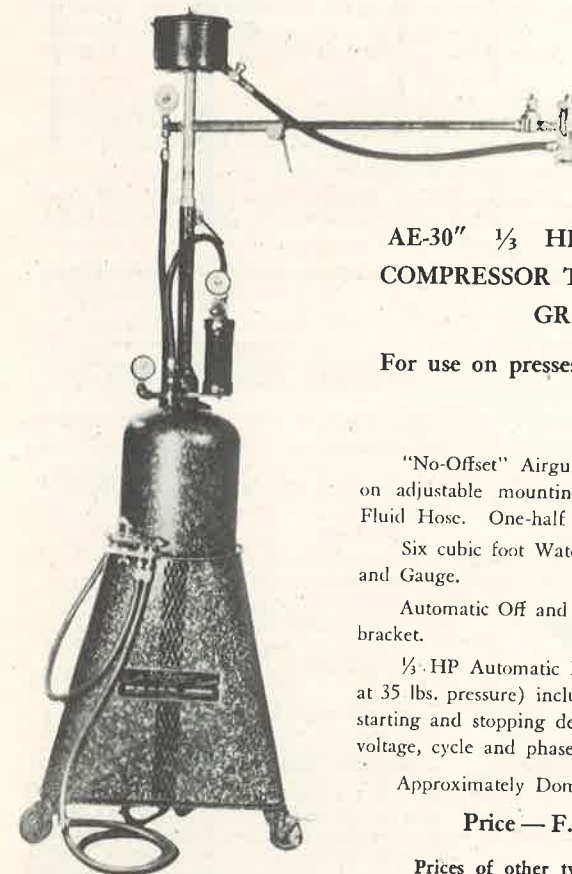


Over Fifty Years of Service to the Graphic Arts

PAASCHE "NO-OFFSET" AIRGUNS

Paasche portable compressor type units, such as the Model-30" illustrated below, meet every pressroom requirement. Readily moved from press to press as needed, these units complete the press and make possible the maximum speeds for which the presses were intended.

We carry the complete line of Paasche "No-Offset" Airguns, and will be pleased to honor requests for catalogues describing this equipment.



AE-30" 1/3 HP STREAMLINED PORTABLE
COMPRESSOR TYPE AIROPERATED ONE GUN
GRAVITY FEED UNIT

For use on presses treating sheets up to 30" in width.

SPECIFICATIONS

"No-Offset" Airgun with Air and Fluid Index, Aircheck Valve on adjustable mounting arm, Adjustable Mounting Post, Air and Fluid Hose. One-half Gallon Gravity Solution Container.

Six cubic foot Water, Oil and Dirt Eliminator, with Air-regulator and Gauge.

Automatic Off and On Timing valve with air hose and mounting bracket.

1/3 HP Automatic Electric Aircompressor (delivers 2.2 cubic feet at 35 lbs. pressure) including large capacity air storage tank, automatic starting and stopping device, rubber wheels, cord and plug. (Specify voltage, cycle and phase.)

Approximately Domestic Shipping Weight 200 lbs.

Price — F.O.B. Chicago, Ill. — \$255.00

Prices of other types and models quoted upon request.

All compressors have large capacity ASME airtank with drain valves — latest safety valve features and meet all code requirements of United States and Canada — automatic starting and stopping switch is standard equipment — completely enclosed unit is mounted on rubber wheels with locking brake. Other operating features such as Off and On Timer, which is easily moved from press to press provide greater flexibility in adapting units to various makes of presses, are identical with Press-mounted Units and Pedestal Type Units. Low mounting post provided for any low delivery press.

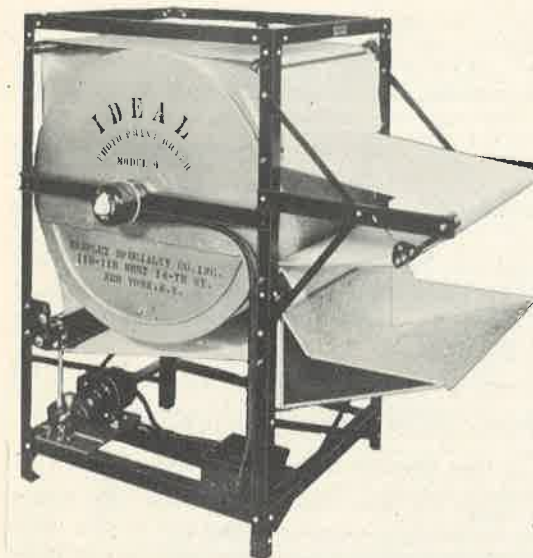
Over Fifty Years of Service to the Graphic Arts

PRINT DRYERS — SIMPLEX

CHECK THESE 6 POINTS BEFORE YOU BUY ANY DRYER

The New Improved SIMPLEX Has Them All!

1. **BELT ALIGNMENT:** SIMPLEX DRYERS have a patented control, both belts held automatically in position. No shifting from side to side.
2. **TRACTION:** SIMPLEX DRYERS are equipped with a direct worm gear drive, guaranteeing positive traction. No leather belts used to slip or break.
3. **DRYING ABILITY:** SIMPLEX DRYERS are guaranteed to properly dry any form of photographic paper — single or double weight, photostatic, blue print, negative, etc. — without any loss of size or tonal value. Dryers are made in 20, 30, 40 and 50 inch widths and are either gas or electrically heated. The popular 30 inch model has a drying capacity of **Three Hundred and Fifty 8 x 10 prints per hour.**
4. **SAFETY FEATURES:** ALL SIMPLEX Gas Models have a combination gas-electric switch and pilot light — making it impossible to turn off the motor without turning off the gas. (PATENTED) Electric models have 3-heat switch. Dryers may be used all day and turned off without injury to the belts. Prints are carried between the two belts — **never touching hot metal.**
5. **ADDITIONAL FEATURES:** Steel drive ball-bearings rollers. Enclosed gears connected with motor by flexible coupling — insuring longer life to motor and gears. Zipper-laced conveying belt. Dryers are fitted with either 110 or 220 volt A. C. or D. C. Motor.
6. All machines are shipped set up, ready to install, and will go through any door 31" wide by dropping arms.



Improved
IDEAL PRINT DRYER

Capacity of 2 feet of drying service per minute.

Gas machine can be furnished to travel 4 feet.

SIZE OF MACHINES

- No. 4—Height 48½", width 29", length, front to back, 47½"
No. 5—Height 48½", width 39", length, front to back, 47½"
No. 6—Height 48½", width 49", length, front to back, 47½"
No. 10—Height 48½", width 59", length, front to back, 47½"

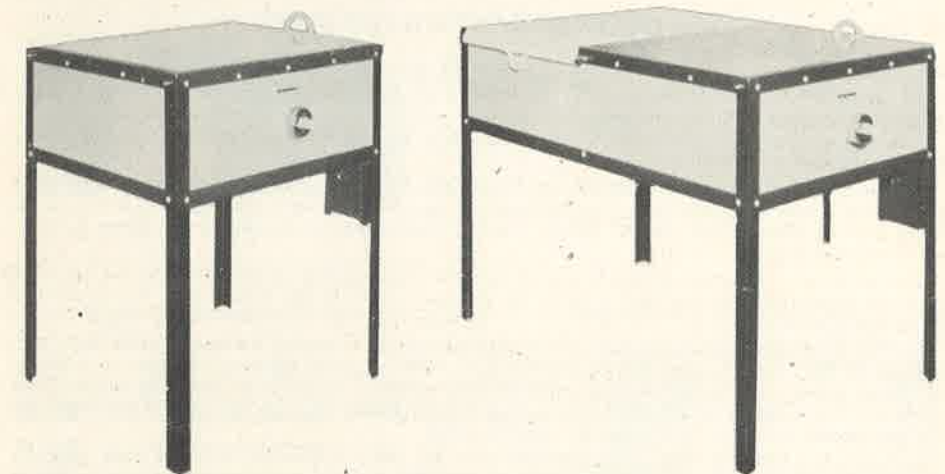
CEILING PRICES TAX INCLUDED

No. 4	Gas Heated	20 in. Belt	\$292.60
No. 4	Electric	20 in. Belt	365.75
No. 5	Gas Heated	30 in. Belt	329.17
No. 5	Electric	30 in. Belt	402.33
No. 6	Gas Heated	40 in. Belt	438.90
No. 6	Electric	40 in. Belt	512.15
No. 10	Gas Heated	50 in. Belt	585.20
No. 10	Electric	50 in. Belt	658.35
No. 11	Gas Heated	60 in. Belt	804.65

Fitted with either 110 or 220 Volt DC or AC Motor 60 Cycle, Motor of 25 to 50 Cycle \$15.00 Extra Net F. O. B. New York.

Over Fifty Years of Service to the Graphic Arts

SIMPLEX GLOSSY TABLE DRYER



A new Glossy Dryer, simple in construction — decidedly effective in results — and as regards price — within the reach of all.

You may have a one-plate machine, size 22" x 26" or as many units as your work may demand. With a two-plate machine using 8" x 10" prints as a guide for production, you can have 120 prints, minimum, per hour and one employee can easily operate a two-plate machine. A curtain device over each plate ensures perfect prints, NO RINGS, NO SPOTS in the finished prints.

CEILING PRICES TAX INCLUDED

One-Plate Dryer	\$131.67
Two-Plate Dryer	197.51
Extra Simplex Chromium Plates 22" x 26"	21.64

Will operate on AC or DC current. When ordering give Voltage.
Highly Polished Chromium Plates, on Copper Base, size 22" x 26".

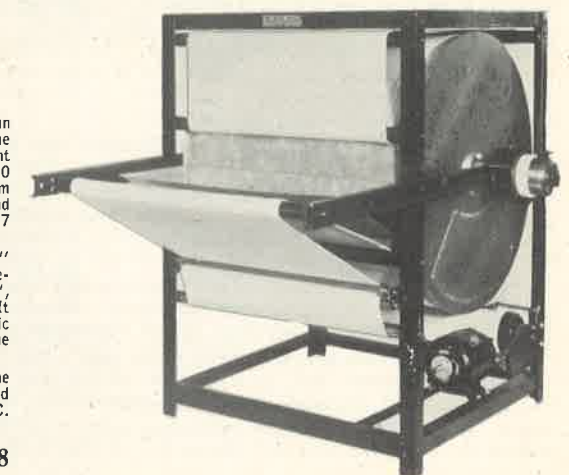
PEERLESS JR.
All Electric Motor-Driven
Rotary Dryer

Here is a small single belt rotary dryer that can run from your wall socket. It has a 14" belt made of the best duck and held automatically in position to prevent sideslip. The dryer is run by a 1/50 H.P. motor 110 volt A.C. or 115 volt D.C. hooked up to a direct worm gear and chain drive, guaranteeing positive traction, and with a power consumption of only 750 watts and 7 amps. Only electrically heated models are available.

The PEERLESS JR. is built to turn out 130 9" x 11" or 100 11" x 14" photostatic prints in an hour. Regular photoprints run 65 8" x 10" or 46 11" x 14", single or double weight, by feeding through twice. It is guaranteed to properly dry any form of photographic paper — single or double weight, photostatic, blue print, etc.

Standing 25" high, 23" wide and 29" deep, the frame is built of strong angle and channel iron and weighs only 66 pounds (100 lbs. crated). Specify A.C. or D.C. when ordering.

Ceiling price, Tax Included\$182.88



Over Fifty Years of Service to the Graphic Arts

DOUTHITT
TEMPERATURE CONTROLLED SINKS

Owing to the modern advances made in improved process films for use in the Graphic Arts industry, and the almost universal use of this material, the problem of correct temperatures for processing the film is of utmost importance in the production of uniform quality work. All experienced workers realize the hazards of varying temperatures, which, when too high or too low, have their particular and sometimes drastic disadvantages in processing films.

Although the Graphic Arts industry has, in this modern medium, a method of producing high grade negatives faster, more accurately, and more economically than with the wet plate process, more careful attention must be given to every factor. Correct constant temperatures for developing and fixing solutions require particular attention.

The process of development is simply one of converting the invisible image caused by the action of light on the photographic material into a visible one that can be seen by the human eye. To do this five materials are needed.

1. The developing or reducing agent which darkens only those parts of the image which have been exposed to the light. 2. The alkali which opens the pores of the gelatin to allow the developer to penetrate the emulsion easily. 3. The preservative which prevents too rapid oxidation by absorbing oxygen from the air. 4. The restrainer which aids in controlling the developing agent so that it will not affect the unexposed particles of silver. 5. The solvent which is water.

Hydroquinone, affected more by temperature than any other developing agent, is most generally used to produce dense, fine-grained images required for halftone and line negatives. Action is best at approximately 65 degrees F. A temperature slightly higher than 68 degrees F. will cause frilling and fogging; speed of development is increased; energy of the reducing agent becomes so strong that it reduces the silver salts on the entire surface of the emulsion and the dot becomes mushy. The solution oxidizes very rapidly at high temperatures and has a tendency to stain the gelatin. This causes a chemical fog and increases the printing time.

Partial decomposition also occurs at high temperatures. The gelatin film will swell and soften, making it extremely difficult to handle and increasing the drying time. At higher temperatures the preservative expands its energy very rapidly, causing the developing solution to age quickly and become unfit for use.

As the various agents in the developer are affected unfavorably by both higher and lower temperatures, any excessive deviation either way from 60 degrees F. will cause the developer to work unevenly and affect contrast. It is imperative that temperatures do not increase or decrease to any great extent. If the temperature is too low there is a hazard of under-development as the action is delayed. Such upsetting of the general development procedure makes it difficult to produce uniform negatives. The Hydroquinone will precipitate when slightly below 60 degrees F., becoming practically inactive. Developing action will be needlessly long or cease entirely.

The fixing bath should be kept at the same temperature as the developer. If too warm, the acid will exert a stronger action and decompose the Hypo into free sulphur. Trouble will be experienced with curling, hardening, shrinking, and stretching. This is particularly true of stripfilm.

Any modern temperature controlled sink should be equipped with both heating and cooling units. Thus, a basic developing time can be established. It will remain constant at any season of the year, for any number of photographers using the same sink.

The modern Douthitt Temperature Controlled Sink meets every requirement for equipment that will maintain an even temperature in the developer, hypo and stop baths. It is neat and compact in construction and contains several entirely new and useful improved features.

The new Douthitt Temperature Controlled Sink is constructed of stainless steel. Automatically controlled refrigerator and heating units are attached to the sturdy metal stand (see illustration). These units will maintain a set temperature both in winter and in summer.

The refrigerator and heater are governed by a dual temperature control, operating within two degrees F. either way from a predetermined temperature. Once set, they require no further attention. If the temperature changes either way from normal, refrigerator or heater will automatically operate.

Between the inner and outer casing of the sink a cork insulation, 1½" thick, holds the temperature even for a considerable time . . . saves wear and operating expense.

The Temperature Control is made especially for use with our sinks. Automatic controls work in unison, with one dial. The only installation necessary for Douthitt Temperature Controlled Sinks is to connect the unit to the drain and plug in the extension cord to the light line.

Over Fifty Years of Service to the Graphic Arts

TEMPERATURE CONTROLLED DEVELOPING SINKS

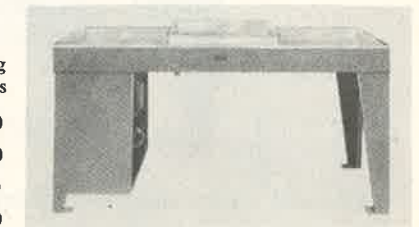


Type DDC — with storage cabinet

Film Size	Sink Price	Bracket Price*	Floor Space	Crating Charges
20 x 24	\$ 520.00	\$50.00	29 x 74	\$25.00
26 x 30	700.00	55.00	34 x 92	30.00
30 x 40	1,050.00	60.00	44 x 107	35.00
40 x 48	1,250.00	65.00	53 x 137	45.00

Type DD — without storage cabinet

Film Size	Sink Price	Bracket Price*	Floor Space	Crating Charges
20 x 24	\$ 420.00	\$50.00	29 x 74	\$25.00
26 x 30	600.00	55.00	34 x 92	30.00
30 x 40	875.00	60.00	44 x 107	35.00
40 x 48	1,150.00	65.00	53 x 137	45.00



*"Extension Bracket" can be attached to right end of sink. The wash tray can then be moved from the center of the sink into the bracket, allowing the use of three temperature controlled trays instead of two.

Type DSC — Single compartment, Individual Developing or Stripping Sink, with Cabinet



Film Size	Sink Price	Floor Space	Crating Charges
26 x 30	\$475.00	31 x 36	\$15.00
30 x 40	530.00	37 x 45	20.00
40 x 48	575.00	47 x 53	30.00

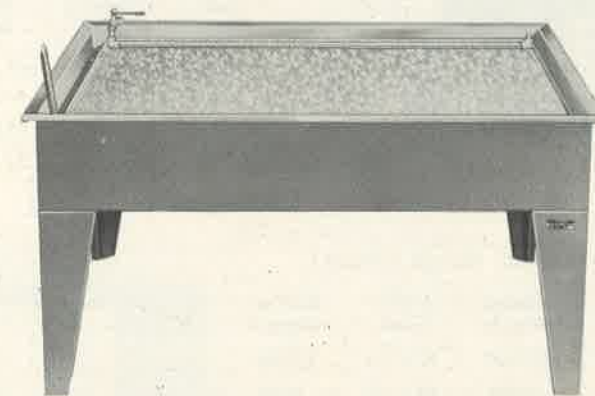
Type DS — Individual Sink, without Storage Cabinet

Film Size	Sink Price	Floor Space	Crating Charges
26 x 30	\$375.00	31 x 36	\$15.00
30 x 40	430.00	37 x 45	20.00
40 x 48	470.00	47 x 53	30.00

Prices based on 110 volt, single phase, 60 cycle current, slight extra charge for other currents. Be sure to give electric specifications when ordering, as well as plate size.

Over Fifty Years of Service to the Graphic Arts

LITHOGRAPHERS PLATE DEVELOPING SINK
FOR LARGE SIZE PLATES



All metal construction, with means for moving plate tray to horizontal position for rough development in free flowing water which carries off loose ink without flowing over the plate. Then to lower plate to angle position for finish developing.

Prices upon request.

STAINLESS STEEL DARKROOM SINKS

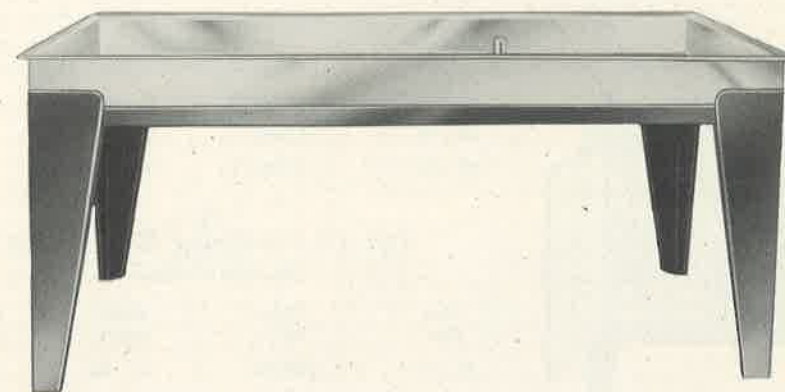
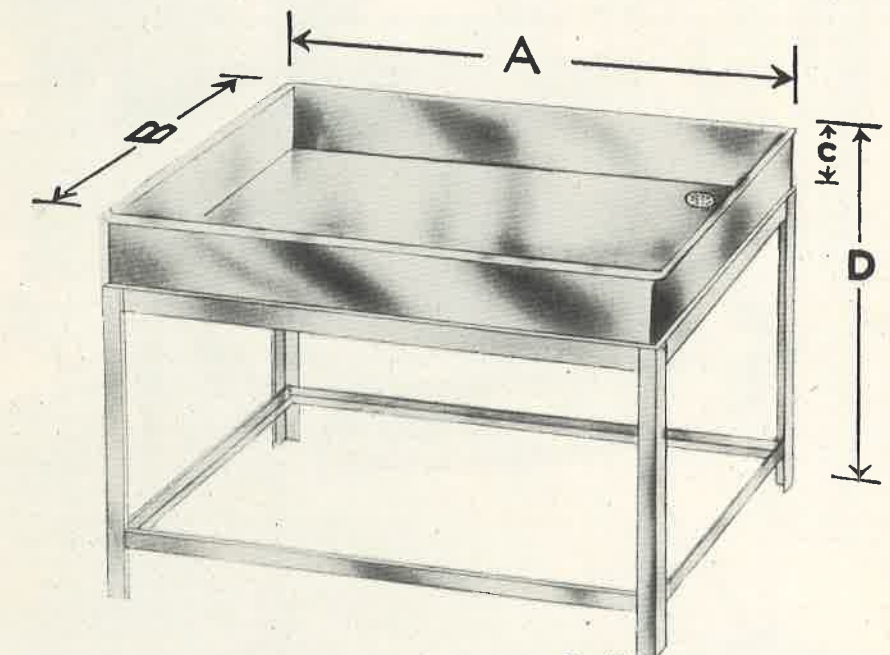


Plate and glass washing sinks, special stripping sinks, etching sinks and trays. Sink proper of stainless steel with angle iron frame and special formed steel legs. Made in any size.

Prices upon request.

Over Fifty Years of Service to the Graphic Arts

18-8 Stainless Steel TYPE "A" — UTILITY SINKS Double Seamed and Soldered



TYPE "A" SINKS are made with heavy wire around top. Furnished with standard 1½" sink drain with screen. Stands are welded angle iron construction, with leveling screws and locknuts to tilt stand for easy draining.

DIMENSIONS				LIST PRICES — TYPE "A"	
A	B	C	D	Sink Only	Stand Only
36"	30"	8"	38"	\$115.00	\$22.00
36"	35"	10"	38"	128.00	24.00
48"	30"	8"	38"	131.00	24.00
48"	35"	10"	38"	143.00	26.00
60"	30"	8"	38"	150.00	26.00
60"	35"	10"	38"	162.00	28.00
72"	30"	8"	38"	168.00	28.00
72"	35"	10"	38"	180.00	29.00

Standpipe drain furnished at \$1.00 extra.

When ordering sinks please specify dimensions and type wanted.

SINKS CAN BE MADE TO ANY DESIRED DIMENSIONS

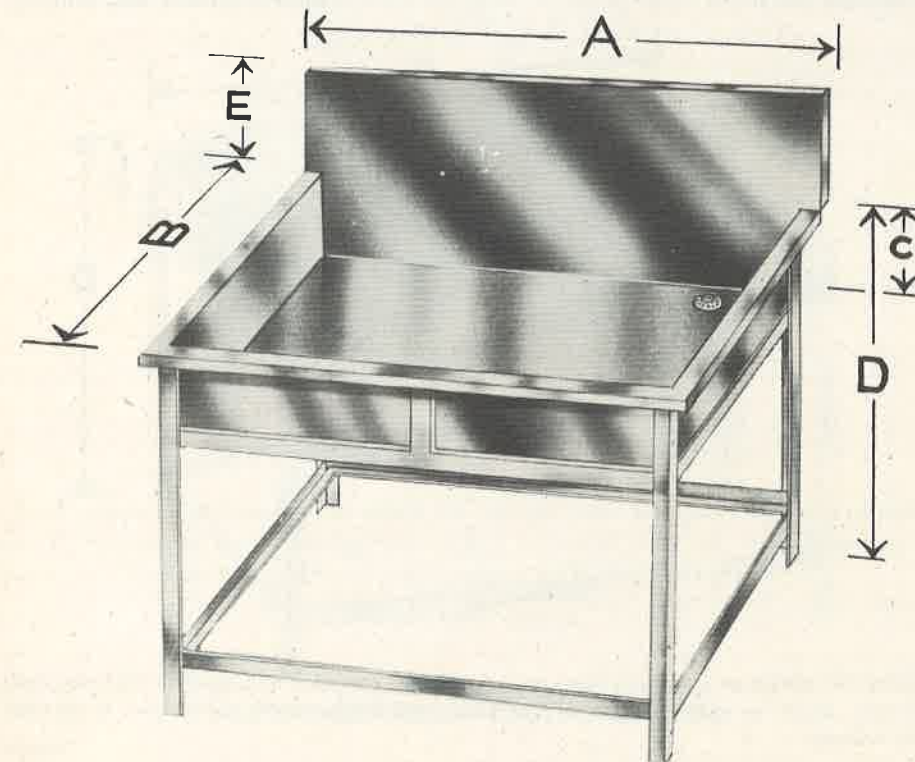
Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

18-8 Stainless Steel

TYPE "B" — UTILITY SINKS

Double Seamed and Soldered



TYPE "B" SINKS are built with flanged ledge around top and angle iron support running inside entire ledge. THIS TYPE OF SINK RECOMMENDED FOR LENGTHS OVER 60". Type "B" easily adaptable for building cabinet around base. Construction of stand similar to Type "A."

DIMENSIONS					LIST PRICES	
A	B	C	D	E	Sink Only	Stand Only
36"	30"	8"	38"	8"	\$130.00	\$26.00
36"	35"	10"	38"	8"	142.00	28.00
48"	30"	8"	38"	8"	144.00	28.00
48"	35"	10"	38"	8"	155.00	30.00
60"	30"	8"	38"	8"	162.00	30.00
60"	35"	10"	38"	8"	175.00	32.00
72"	30"	8"	38"	8"	182.00	32.00
72"	35"	10"	38"	8"	195.00	33.00

Standpipe drain furnished at \$1.00 extra.

When ordering sinks please specify dimensions and type wanted.
SINKS CAN BE MADE TO ANY DESIRED DIMENSIONS

Over Fifty Years of Service to the Graphic Arts

ROBERTS & PORTER, INC.

THE "ROBPORT" SPEEDJACKET MACHINE



The Robport Speed Jacket Machine is designed and built by engineers who are thoroughly familiar with the problems of the offset craftsman. A precision machine, built from the best materials available.

Easily operated, it is equipped with many special features: 1. Brad-Foote Speed Reducer — Bronze Geared — Self-Oiling. 2. Completely Universal Power Unit — nothing to adjust — nothing to get out of line, and parts are interchangeable. 3. Alemite grease fittings on all bearings. 4. Heavy duty casting, standard on all machines and interchangeable. 5. All running parts are equipped with bronze bushings or roller bearings. 6. Legs and base of extra heavy steel. A lifetime of use designed and engineered into each machine. EQUIPMENT: — Motor — 1/3 H.P. AC or DC, 220 or 110 volt, 60 cycle. Switch — Cutler Hammer, start stop. Speed Control Selector. Forward and reverse switch.

Micro-Switch, over-run cutout. Floor stand-roller Guide. Guiding Tube.

SPECIFICATIONS: — Model No. HG, Roller O.D. 2 1/4" or 3-13/16". Roller length up to 72".

MACHINE DIMENSIONS: — Overall length 86". Height 30". Width 24".

Price — F. O. B. Chicago, Ill. \$750.00
Extra Guiding Tubes 10.00 each

Over Fifty Years of Service to the Graphic Arts

THE "ROBPORT" SPEEDJACKET MACHINE (continued)

Every offset craftsman knows the advantages of machine made dampener rollers for quality printing. Known also is the difficulty of getting smooth rollers when sewn and applied by hand. Now, with Roberts and Porter Speed Jackets, applied with the Robport Speed Jacket Machine, all the advantages of dampener roller quality are obtained without the inconvenience and time-loss in sending rollers out of the shop for re-covering.

A Robport Speed Jacket Machine in your plant, with Robport Speed Jackets, will provide your offset equipment with "TAILORED" dampening rollers in a minimum amount of time.

Tests prove that a set of three 72-inch dampening rollers can be recovered with "TAILORED" Precision sleeves in an average time of 15 minutes. Compare this performance with the time required and higher cost of hand-sewing and applying hand fashioned sleeves—and you'll be convinced that the Robport Speed Jacket Machine will pay for itself in time saved—and make better lithographing easier.



Hand sewn and applied sleeve. Twisted, bulging seam, giving uneven contact to plate. Would require long run-in period.



Showing the Robport Speed Jacket. Note the smooth unbroken surface and "Tailored to fit" drum tight. Ready to run perfectly.

THE SPEED JACKET SYSTEM

Roller cores for a given size press vary in diameter because they have frequently been turned down in truing. The Speed Jacket System affords a quick, economical and most efficient method for building these rollers up to the required sizes.

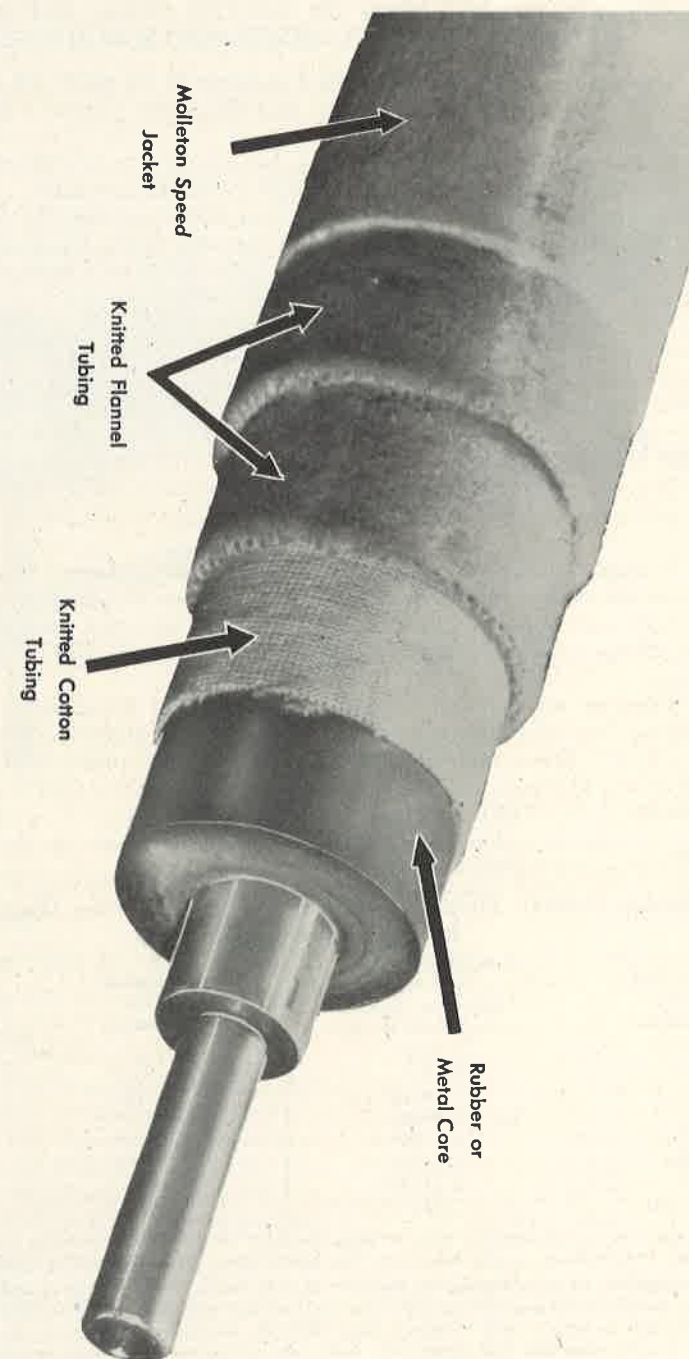
Two materials are used under the Speed Jacket. These materials are a thick knitted flannel tubing, developed for its high moisture absorbing properties, and a thinner cotton tubing. With these two materials of different thicknesses it is possible to build the roller up to the exact diameter necessary to assure a tight, smooth fit for the Speed Jacket.

Being seamless, the knitted tubings present a smooth surface, free from rough spots and unevenness to the inside of the Speed Jacket. A smooth surfaced, perfectly operating roller is the result.

See illustration on following page.

Over Fifty Years of Service to the Graphic Arts

Knitted Flannel Tubing and cotton tubing for underpacking can be applied to any core in one or more layers, bringing the dampening roller size to any desired diameter.



Over Fifty Years of Service to the Graphic Arts

INSTRUCTIONS FOR BUILDING UP ROLLER CORES BEFORE COVERING WITH THE ROBPORT MOLLETON SPEEDJACKET*

(1) Using table 1, pick out the finished diameter of the roller you are to cover with a ROBPORT SPEEDJACKET. You will find the proper diameters in column (A) of table number 1.

(2) Looking at column (B) of table number 2, note that the diameter of the roller is given BEFORE APPLYING THE MOLLETON SPEEDJACKET.

(3) As an example, let us assume that your roller calls for 3 1/16 inches finished diameter. Looking at column (B) you will find the figure 2 7/8 inches. That is the diameter that the roller must be built up to in order to insure a tight, snug fit when the roller is forced into a SPEEDJACKET.

(4) Because roller cores vary in diameter, due to being cut down and trued, it is recommended that you use ROBPORT knitted flannel tubing and ROBPORT seamless cotton tubing to build up the roller cores to the proper diameter before the application of the molleton SPEEDJACKET. By using knitted flannel tubing you eliminate bumps in the roller caused by bulky seams and in addition save a tremendous amount of time in sewing the flannel undercovers.

(5) Due to a difference in thickness between the flannel tubing and the cotton tubing you can use these two products in combination or singly to achieve the proper diameter needed.

(a) Example: Should you apply two layers of knitted flannel tubing and still find that you are too small in diameter as called for in column (B) and another layer of flannel tubing would make you too large THEN use one layer of cotton tubing. As you can see, these two products, in combination, will give you almost every diameter variation possible to achieve.

(b) Example: Should your rollers be rubber covered almost to the diameter that is needed — one layer of flannel tubing would again be too much so use the cotton tubing instead. NOTE: It is recommended that all rubber covered rollers carry at least one layer of cotton tubing to protect the rubber and permit the SPEEDJACKET to slide on easier.

Caution: If the SPEEDJACKET cover feels too loose, after it is applied, you should add another layer of cotton tubing to the undercover to take up the slack. SPEEDJACKETS should be tightly applied for best results.

Relationship Between Finished Diameter and Undercovering Diameters For The Robport Molleton Speedjacket

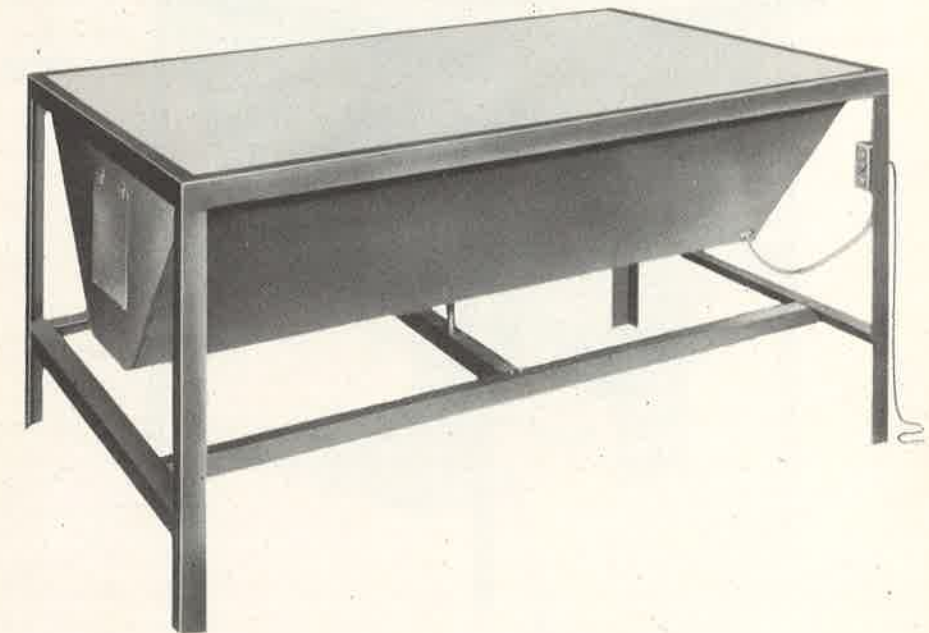
Finished Roller Diameter	Build Roller Core Up To Following Dimensions Before Covering With Molleton	Finished Roller Diameter	Build Roller Core Up To Following Dimensions Before Covering With Molleton
1 1/2"	1 3/16"	3 1/6"	2 7/8"
1 3/4"	1 5/8"	3 1/8"	2 7/8" *
2 1/4"	1 15/16"	3 5/16"	3 1/8"
2 1/2"	2 5/16"	3 1/2"	3 5/16"
2 5/8"	2 5/16" *	3 9/16"	3 3/8"
2 7/8"	2 11/16"	3 13/16"	3 3/8"
3"	2 13/16"		
(A)	(B)	(A)	(B)

* Where this asterisk appears, place at least one layer of ROBPORT seamless cotton tubing over the flannel after it is built up to this diameter. The measurement is too close to be absolutely accurate.

It is suggested, when measuring the diameter of your rollers, that you keep in mind that sharp pointed calipers or similar measuring devices sink into the material and give a false reading unless great care is taken. It is best to keep a strip of heavy paper with the circumference marked on this strip for future reference. Simply place this strip around the roller and see that the marks are meeting and you are then ready to cover with the SPEEDJACKET.

Over Fifty Years of Service to the Graphic Arts

BROWN LAYOUT TABLES



The BROWN Layout Tables are of all steel welded construction, which is standard in all our equipment.

Brown layout tables are equipped with grained plate glass top for diffusion of light, straight edges on four sides and Fluorescent lighting.

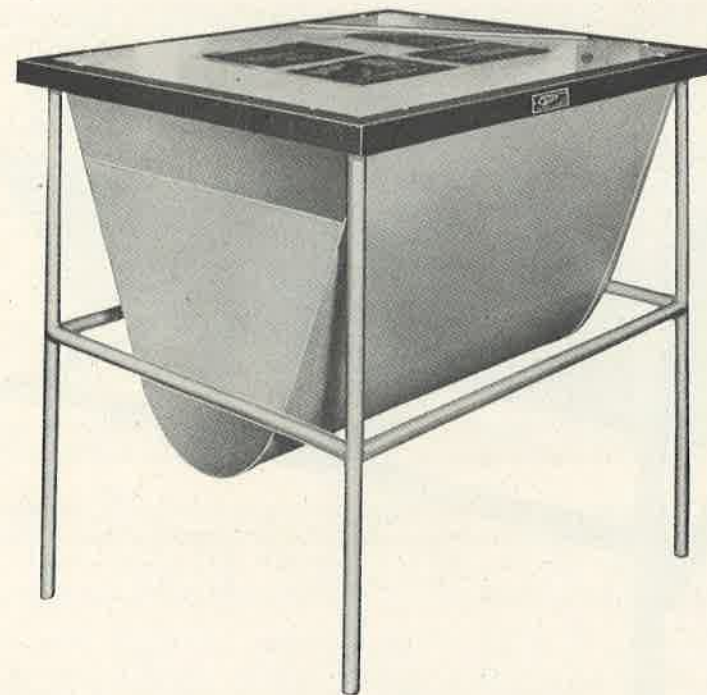
BROWN LAYOUT TABLES	A-C	D-C
20 x 24 Complete with fluorescent lighting and cord.....	\$120.00	\$135.00
30 x 40 Complete with fluorescent lighting and cord.....	140.00	155.00
37 x 48 Complete with fluorescent lighting and cord.....	185.00	200.00
40 x 60 Complete with fluorescent lighting and cord.....	200.00	215.00
50 x 70 Complete with fluorescent lighting and cord.....	230.00	245.00
50 x 77 Complete with fluorescent lighting and cord.....	260.00	275.00

Stripping Tables (Prices on request)

Retouching Tables (Prices on request)

Over Fifty Years of Service to the Graphic Arts

ROBERTSON LAYOUT TABLES



All metal construction with fluorescent lights.

20 x 24.....	\$130.00	30 x 40.....	\$168.00
22 x 28.....	140.00	32½ x 43.....	191.00
26 x 30.....	148.00	39 x 50.....	215.00
25½ x 36.....	156.00	45½ x 54.....	235.00

ROBERTSON STRIPPING TABLES

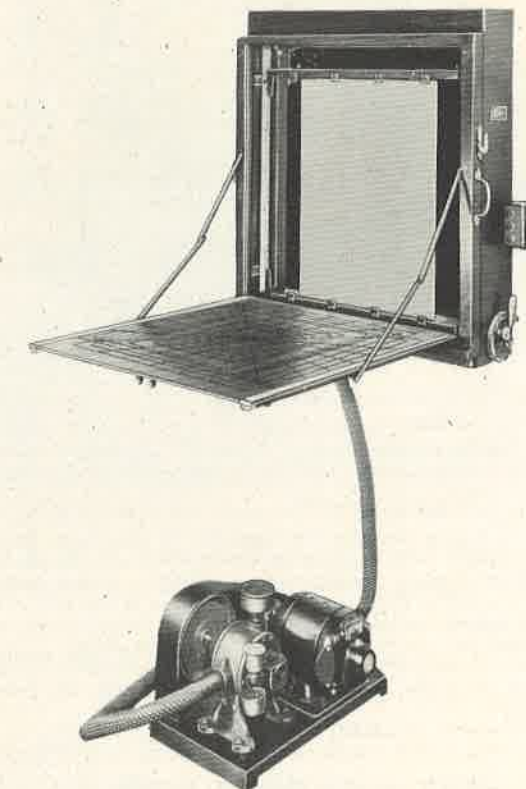
	With Water Connection	Without Water Connection
20 x 24.....	\$200.00	\$160.00
22 x 28.....	215.00	175.00
26 x 30.....	240.00	200.00

Over Fifty Years of Service to the Graphic Arts

ROBERTSON VACUUM FILM HOLDER

These vacuum film holders are made to take any size film up to the full capacity of the camera. No masks are necessary to cover up the portion of the plate not covered by the film.

It is only necessary to lay the film down on the vacuum plate, turn on the motor and the film is held flat. This is by far the best, cleanest and quickest system for holding film.

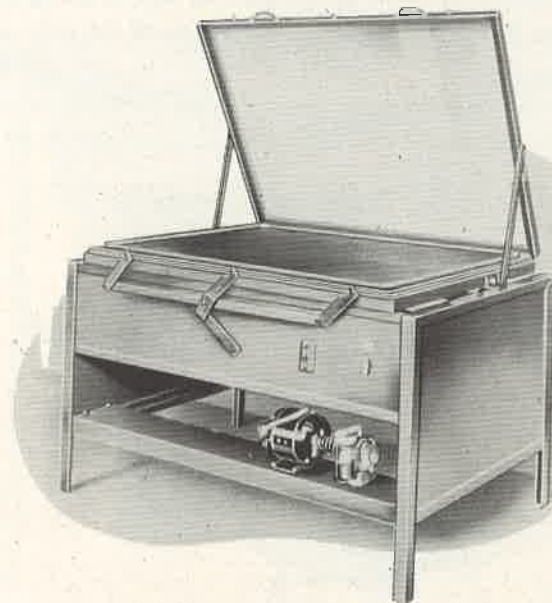


ROBERTSON VACUUM FILM HOLDER, complete with frame to fasten on rear case of camera, vacuum plate, motor and pump:

20".....	\$300.00
24".....	300.00
31".....	375.00
36".....	550.00
40".....	600.00

Over Fifty Years of Service to the Graphic Arts

BROWN VACUUM PRINTING FRAMES
Counter-Balanced Hinged Type



The BROWN Vacuum Printing Frame has been developed to provide a fast and sure means of printing. It is one of the most sturdy and efficient frames on the market today regardless of price, being of all welded steel construction.

Frames are hinged at the back and locked by two clamps operated by one hand lever. The clamps operate over ballbearing rollers, making operation easy regardless of size. Upper frame, holding glass, is counter-balanced by a new adjustable compression spring device which prevents accidental dropping with resultant damage to glass. When clamped together, both are tilted to vertical position for printing by releasing small trip lever, or if overhead printing lamp is used it may be operated at horizontal. Finished in grey enamel, complete with pump and motor.

Automatic Vacuum Control and reservoir tank can be furnished if desired.

The efficient Mercoid valve is employed in this control. It is recommended because of the saving in power and wear and tear on the motor pump unit, as with this control the motor runs only when vacuum drops below a safe level.

Maximum and minimum vacuum adjustment may be made by the operator.

Automatic timer and arc lamp control can be furnished according to your specifications.

BROWN VACUUM PRINTING FRAMES
Complete with pump, motor, and vacuum gauge.

Counter-Balanced Hinged Type:

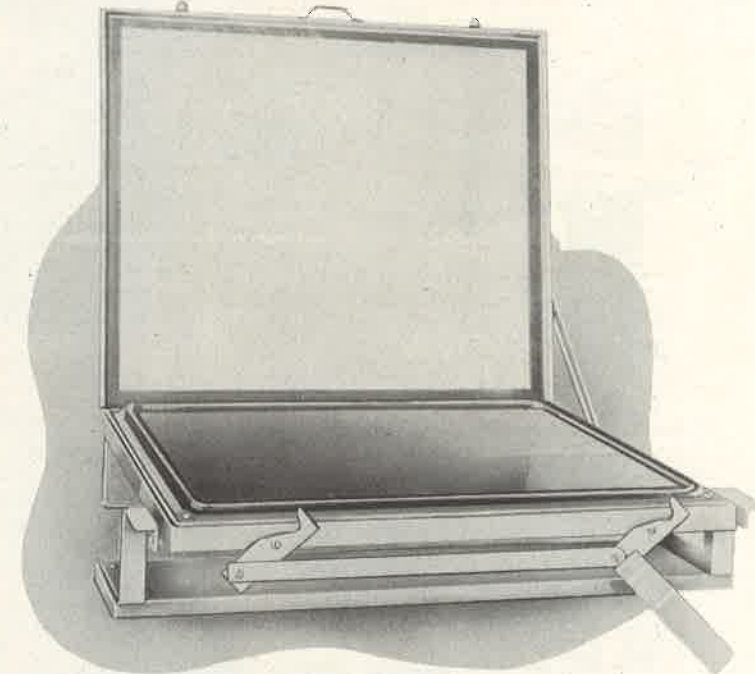
14 x 17.....	\$175.00	37 x 48.....	\$320.00
16 x 20.....	180.00	39 x 50.....	345.00
20 x 24.....	195.00	42 x 54.....	350.00
22 x 28.....	210.00	46 x 54.....	370.00
26 x 30.....	240.00	46 x 55.....	375.00
28 x 36.....	275.00	40 x 60.....	375.00
30 x 40.....	290.00	50 x 66.....	550.00
33 x 43.....	305.00	50 x 70.....	600.00

Above vacuum frames are available with automatic vacuum control and reservoir tank. Price, \$45.00 additional, and is recommended on sizes 26 x 30 and larger.

Automatic arc lamp timer can also be furnished with contactor for operating lamp. Price additional for alternating current, \$60.00. Price additional for direct current, \$80.00.

Over Fifty Years of Service to the Graphic Arts

BROWN VACUUM PRINTING FRAMES
Bench Model — Darkroom Type



The BROWN Bench Model Vacuum Printing Frame is the same metal construction and appointments, but without stand. It has been designed to meet popular demand for a sturdy moderate priced frame to operate in a minimum of space with maximum speed and convenience either side or outside of darkroom.

Complete with pump and motor.

Bench Model — Darkroom Type:

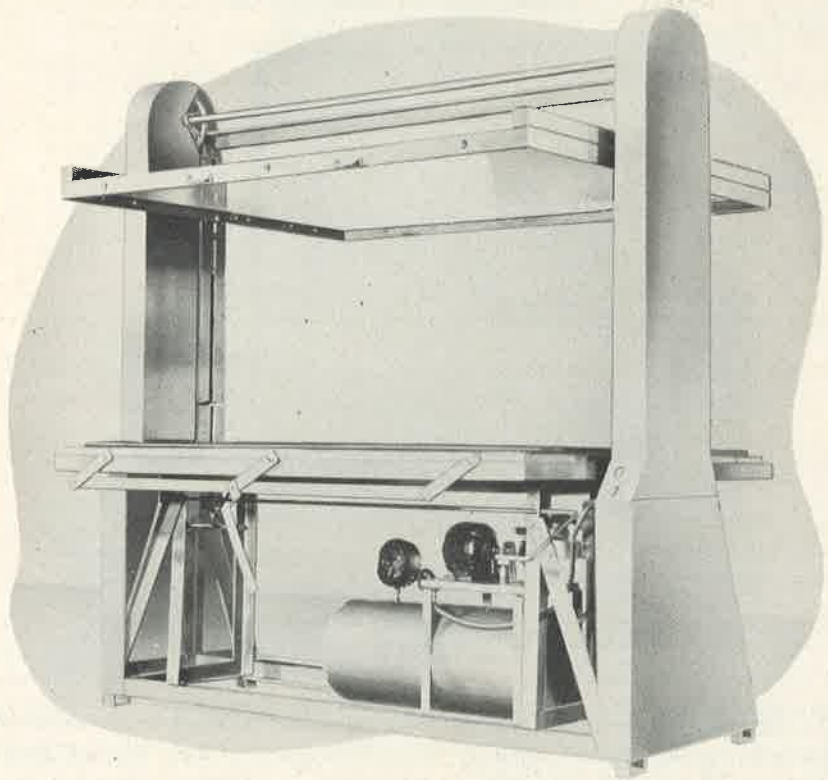
16 x 20.....	\$140.00	Counter-Balanced	
20 x 24.....	150.00	26 x 30.....	\$195.00
22 x 28.....	160.00	28 x 38.....	225.00

OTHER SIZES ON REQUEST

When ordering please furnish current specifications including type of current, voltage, phase and cycle.

Over Fifty Years of Service to the Graphic Arts

BROWN VACUUM PRINTING FRAMES
Elevating Type



The BROWN Elevating Type Vacuum Frame is of all welded steel construction and is designed for convenience and efficiency in handling large size prints. This frame permits easy access to the work on all sides and is obtainable in sizes 30" x 40" and larger.

Its design is distinctly different in that the top frame holding the glass, remaining horizontal, is elevated or lowered to position by a counter-balanced suspension system. When lowered to rest on the frame, which carries the blanket, clamps operated by one hand lever lock them into position, front and back, and make a perfect contact.

After locking, the two frames are swung to vertical position for printing by operating a small trip lever at the front.

Automatic Timer and Arc Lamp Control can be furnished, if desired.

Complete with Pump, Motor, Automatic Vacuum Control and Reservoir Vacuum Tank.

ELEVATING TYPE VACUUM PRINTING FRAME

Complete with pump, motor, automatic vacuum gauge, and reservoir tank:

30 x 40.....	\$610.00	46 x 54.....	\$650.00
33 x 43.....	615.00	50 x 66.....	700.00
37 x 48.....	620.00	50 x 70.....	775.00
40 x 60.....	625.00	60 x 72.....	900.00
42 x 54.....	630.00		

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DOUTHITT CONTACT VACUUM PRINTER
For Making Positives

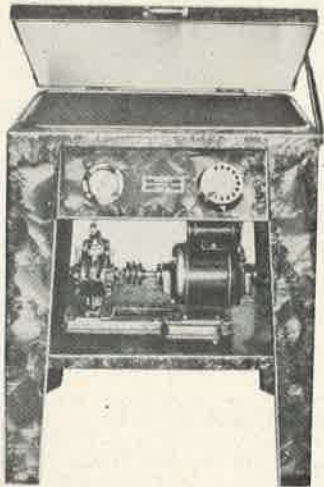


TYPE A — Complete with vacuum pump and motor, vacuum gauge, ruby and white lights, dial seconds time and rheostat for light control of self contained light.

Plate Size	Price	Floor Space	Crating Charges
20 x 24	\$270.00	28 x 32	\$17.50
22 x 28	295.00	28 x 34	18.50
26 x 30	310.00	32 x 36	20.00
30 x 40	360.00	35 x 46	22.50

Prices based on 110 volts, single phase, 60 cycles. Extra charge for other currents. Subject to Federal Excise Tax. Specify current and plate size.

DOUTHITT CONTACT VACUUM PRINTER
For Overhead Illumination



TYPE B — All metal construction, complete with pump, motor and vacuum gauge.

Plate Size	Price	Floor Space	Crating Charges
20 x 24	\$230.00	28 x 32	\$17.50
22 x 28	245.00	28 x 34	18.50
26 x 30	260.00	32 x 36	20.00
30 x 40	300.00	35 x 46	25.00

Dial Seconds Timer and Lamp Rheostat can be furnished for Type B at \$15.00 additional. Prices based on 110 volt, single phase, 60 cycles. Extra charge for other currents. Subject to Federal Excise Tax. Specify current, plate size and if timer desired.

Made in types A and B. Type A has a single white light inside with special reflector for even illumination of the entire surface, and also a ruby bulb for adjusting medium. It is equipped with finger dial seconds timer for accurate and easy timing, also rheostat light control for dimming the light to conform to the required printing time.

When making print simply dial the number of seconds required. If full illumination prints too fast lower the light output with the rheostat.

Type A is a neat compact unit of substantial metal construction. With instrument board on the front containing all instruments and switches used in operation.

The motor and vacuum pump are contained inside and are easily accessible for oiling. Light compartment with sliding door for changing light.

Shipped complete ready for instant set up and operation.

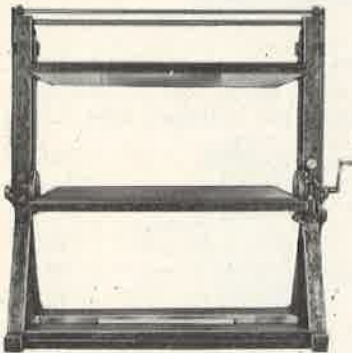
Type B is made for overhead illumination. With or without finger dial seconds timer and light rheostat for connections to light line.

All metal construction, complete with high-grade rotary type vacuum pump and motor.

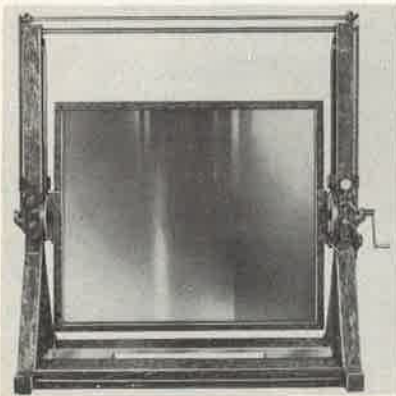
For efficient, accurate and uniform prints under absolute control. Saving in time and labor.

Over Fifty Years of Service to the Graphic Arts

THE DOUTHITT REVOLVING TYPE VACUUM
PRINTING FRAME



OPEN, GLASS DOWN



READY FOR PRINTING

With vacuum reserve tank, vacuum cut-out switch, pump and motor, vacuum gauge, special revolving mechanism which permits either glass or blanket frame to be used up or down and other essential and valuable features not found in any other vacuum printer.

PATENTED

Plate Size	Price	Floor Space	Crating Charges
36 x 48	\$ 885.00	48 x 60	\$45.00
40 x 50	925.00	52 x 62	47.50
46 x 56	985.00	58 x 66	50.00
48 x 60	1,045.00	62 x 74	60.00
50 x 70	1,120.00	64 x 82	65.00
54 x 74	1,220.00	68 x 88	70.00
60 x 80	1,430.00	75 x 95	75.00

Prices based on 110 volt, single phase, 60 cycles. Extra charge for other currents. Specify current and plate size when ordering.

WALL TYPE VACUUM PRINTING FRAME

Folds up to wall when not in use. Saves space. May be used in the dark-room. Complete with motor, pump and vacuum gauge only.



Plate Size	Price	Floor Space	Crating Charges
16 x 20	\$140.00	20 x 24	\$12.50
20 x 24	160.00	24 x 28	15.00
24 x 36	185.00	30 x 40	17.50
30 x 40	200.00	35 x 45	20.00

Prices based on 110 volt, single phase, 60 cycles. Extra charge for other currents. Also made in table model. Prices shown above. Specify current plate size and model desired.

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THE DOUTHITT REVOLVING VACUUM PRINTER (See Opposite Page)

The machine is constructed throughout of substantial fabricated metal. The glass and blanket frames are of square seamless steel tubing, welded at all corners and thus making each frame one complete unit, thereby maintaining the frames parallel to each other without stress or warpage. The two main upright side members also are of heavy square steel tubing. When the machine is assembled these constitute a substantially rigid device, exceptionally easy to operate.

The base of the machine is made to serve the dual purpose of a large vacuum reservoir, from which air is automatically withdrawn by a pump equipped with a vacuum cutout switch, which stops the motor when vacuum has been obtained. The vacuum reserve reservoir creates almost instantaneous vacuum between the two frames when turned on. A three-way valve automatically effects a quick release of vacuum by admitting air to the blanket frame when turned off, simultaneously closing the line to the reserve reservoir, so that the vacuum in the reservoir is not dissipated.

The paramount feature of the Douthitt Revolving Printer is that either the glass or blanket frame may be positioned up or down simply by rotating the frames on the specially designed Douthitt Gyrotory Axis. This ingenious rotary mechanism consists of an accurately machined cast iron housing in which two semi-circular steel discs revolve when both frames are in contact. These discs have milled keyways for locking either the glass or the blanket frame securely in horizontal position, or both frames in vertical position during printing. This special feature is exclusive in the Douthitt Revolving Vacuum Printer, and is not found on any other vacuum printing frame. It is a very decided advantage when positioning images on albumen or deep etch litho pressplates, and also in layout operations and the register of negative or positive images for color work. The diffused fluorescent tube situated on the base of the frame provides illumination for viewing images and work by transmitted light.

The accurate and rigid construction of the metal frames carrying the glass and blanket allows exact vacuum contact to be made without the use of cumbersome clamps. This action takes place through the Gyrotory Axis assembly eliminating difficulty experienced with worn out clamps. It also eliminates the time required for positioning and setting the clamps. When the glass comes into contact with the special pneumatic moulding on the rubber blanket, the edges are securely sealed; all that is now necessary is to lower the upper section to an automatic set stop then turn on the vacuum, which contacts instantly.

Equipped with a high-grade vibrationless rotary vacuum pump, the Douthitt Revolving Printer is quiet in operation, also embodying the following structural improvements to make for convenient and easy use: Forced air cooling, combination oil trap and muffler, continuous air flow, vacuum pressure electric cut-off-and-on switch for automatic operation of pump motor at 5-inch vacuum differential. Degree of vacuum may be varied at will by manipulation of this switch. Pump and motor unit are separate and may be installed in the most convenient location.

The particular advantage of the DOUTHITT REVOLVING VACUUM PRINTER is the ease with which either the glass or blanket frame can be set in a down and horizontal position and at a convenient height for the worker.

In the production of photolithographic albumen and deep etch plates, as well as in photoengraving, it may be preferable to have the blanket frame down (glass frame elevated) when positioning negatives or positives on the sensitized metal surfaces. Elevation of the glass and absence of obstructive clamps permit easy and convenient working from either side of the frame, thus rendering accurate positioning of images—required in set-ins, double printing and color work—a matter of ease and comfort. For exposing collotype images on sensitized glass or metal, the same conditions will apply.

In operations such as preparing and lining up layouts, inserting negatives or positives into layout and checking the final assembly of images, it is practical to have the glass frame down, so that the operations may be carried out on the glass and the work illuminated by transmitted light from the fluorescent tube.

This arrangement is particularly convenient when making vandyke ("silver" or "brown") prints, also when exposing blue print and photolac (dyed colloid images on glass plates), and for registering film negatives and positives on such images.

The glass down arrangement is further very convenient when exposing gravure carbon tissue. The positives can be positioned with accuracy and ease on the glass surface, and after attachment of the positive form to the glass (with transparent cellulose tape), the sensitized carbon tissue can be laid in correct position on the positive form. Printing of silk screen images on carbon tissue is an operation in the same category, the sensitized tissue easily being laid on the line or halftone images intended for reproduction by the silk screen process.

In addition to these conveniences, the glass down position of the frame provides a roomy layout table and retouching stand, on which spotting, opaquing, bending on blue prints and other operations requiring the work to be illuminated by transmitted light can be carried out with the greatest degree of efficiency and freedom from eye and physical strain on the part of the workman.

The ease with which the position of the frames on the DOUTHITT REVOLVING VACUUM PRINTER can be changed offers so many advantages and avenues of utility that its value in any photo-mechanical establishment will be appreciated in greater measure every day that the frame is in use.

Really a dual instrument, its convenient operation and appearance is enhanced by another improvement—the absence of unsightly and obstructive clamps, heretofore considered necessary for maintaining vacuum, especially in frames of large size.

Over Fifty Years of Service to the Graphic Arts

THE DOUTHITT TYPE "D" VACUUM PRINTING FRAME

With Vacuum Reserve Tank, Vacuum Cut-out Switch, Adjustable Vacuum Control, Vacuum Gauge, Interval Timer, Pump and Motor Complete and Full Size Drawer



Manufactured of metal throughout and has vacuum gauge, air valve, electric switch and interval timer attached to front instrument board in plain view and in convenient position for operation. It is also equipped with a full size metal drawer for convenient storage of masking paper, etc.

With the spring and fulcrum bracket arrangement attached to the frame, the glass section may be raised with very slight effort to any position for loading and will remain in that position until moved. It does not require any balance weights or cumbersome clamps; just lower the glass onto the rubber blanket and turn on the vacuum. Then raise both frames to position for making prints.

The spring fulcrum arrangements also equalizes the weight of the loaded frame, making it exceptionally easy to swing into position for printing.

The 3-way valve provides for instantaneous release of vacuum on the blanket.

The glass and blanket frames are of square seamless steel tubing, welded at all corners thereby maintaining the frames exactly parallel to each other without stress or warpage. The main body of the printer is also of steel tubing welded into one compact unit and when assembled constitutes a rigid well-made machine to render long service.

The spacious shelf on the printer is also a vacuum reserve tank from which the air is evacuated by a silent, rotary type vacuum pump equipped with a vacuum cut-out switch which automatically stops the motor at any desired vacuum and starts when the vacuum decreases five inches. This prolongs the life of the pump and motor and also creates instant vacuum between the two frames.

Exceptionally easy to operate, (Finger Tip Control) Automatic clamping. Instantaneous vacuum, conserves floor space. Neat and compact in appearance.

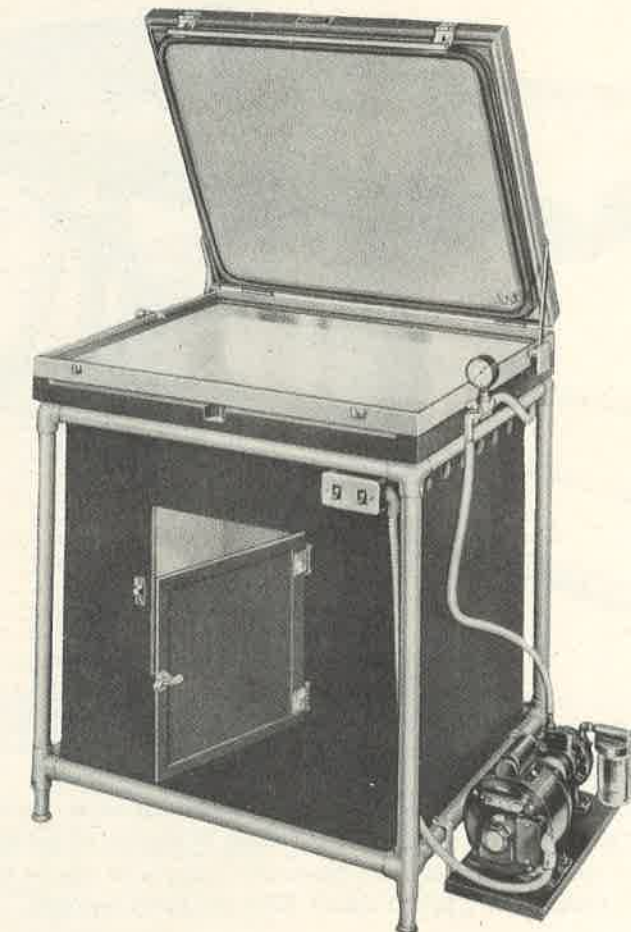
Plate Size	Price	Floor Space	Crating Charges
20 x 24	\$225.00	26 x 30	\$18.00
22 x 28	245.00	27 x 34	19.50
26 x 30	255.00	30 x 36	20.00
28 x 36	270.00	32 x 42	21.50
30 x 40	300.00	34 x 46	22.50
36 x 48	325.00	41 x 55	24.00
40 x 50	340.00	46 x 57	27.00
46 x 56	360.00	51 x 61	29.00
48 x 60	425.00	54 x 67	30.00
50 x 70	575.00	55 x 75	35.00
54 x 74	675.00	60 x 82	40.00

Prices based on 110 volt, single phase, 60 cycles. Extra charge for other currents. Specify current and plate size when ordering.

Electric timer and relay to control exposure time automatically can be furnished, mounted on any of our printing frames. Prices quoted separately.

Over Fifty Years of Service to the Graphic Arts

ROBERTSON POSITIVE PRINTING FRAME



This frame has the glass in the lower frame, the upper frame has the rubber vacuum blanket, and this blanket has our new type beading to prevent leakage.

Underneath the glass frame are five white electric bulbs and one red bulb, and these bulbs have a housing around them to prevent light from coming out in the dark room.

The white lights are arranged so as to give uniform light for printing over the entire surface of the glass plate so either one or five lights can be used for printing.

Switches are conveniently located for operating the light and vacuum.

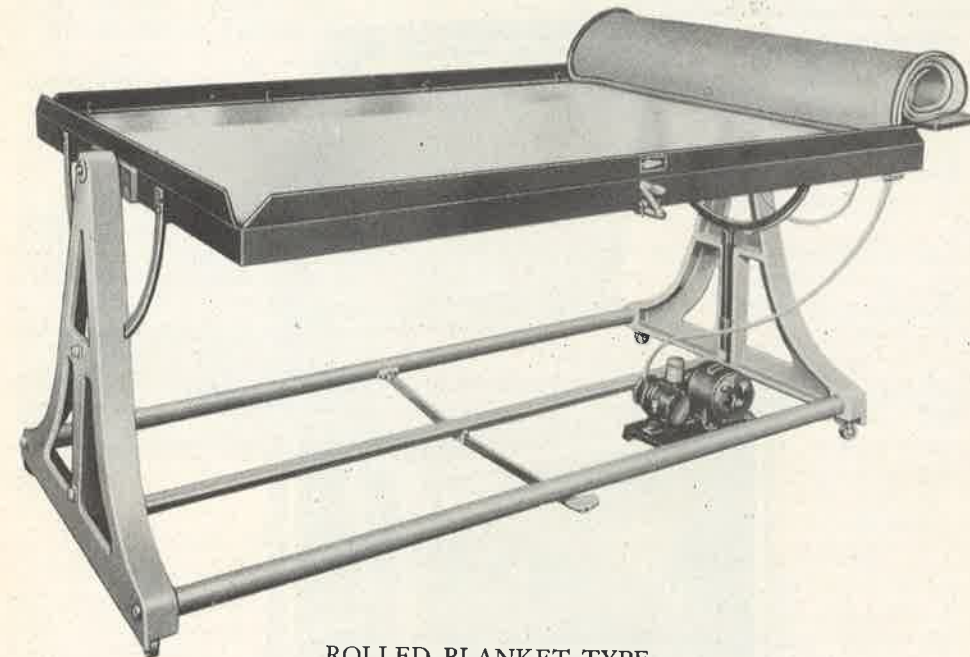
ROBERTSON POSITIVE PRINTING FRAME

Complete with blanket, lights, vacuum gauge, motor and pump

TO TAKE PLATES UP TO — 20 x 24"	\$250.00
22 x 28"	275.00
30 x 40"	310.00

Over Fifty Years of Service to the Graphic Arts

ROBERTSON VACUUM PRINTING FRAME



ROLLED BLANKET TYPE

This type frame is generally used by Rotogravure and Blue Printing concerns. The frame is of metal construction.

The vacuum blanket has our new type air cushion beading.

A handle is located at the front of the frame for closing or raising the wings that hold the vacuum blanket. The operation of the frame by the use of one handle makes it convenient for the operator. A foot lever releases the frame so it may be turned into any position and held there. The frame is rigidly built and easily operated.

ROBERTSON VACUUM PRINTING FRAME
(Rolled Blanket Type) complete with motor, pump and blanket

26 x 30"	\$ 630.00	42 x 54"	\$ 800.00
25½ x 36"	675.00	45½ x 54"	840.00
28 x 36"	725.00	46 x 55"	840.00
30 x 40"	750.00	40 x 60"	950.00
34 x 38"	760.00	50 x 66"	1,050.00
32½ x 43"	775.00	50 x 70"	1,125.00
37 x 48"	780.00	45 x 88"	1,300.00
39 x 50"	800.00		

Prices F.O.B. Chicago

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ROBERTSON New Model VACUUM PRINTING FRAME



This new model frame has many new features which have been most desired but until now no frame has had.

The new features include:

New type blanket which creates and releases vacuum much more quickly and holds vacuum efficiently. New type blanket has a better surface allowing the plate to lie level, which helps considerably on register work.

The frame is equipped with motor control which always assures vacuum and keeps vacuum in the frame without running the motor during the printing, thereby saving electric current.

The frame is equipped with springs which counterbalance the upper frame making it very easy to raise and lower the frame. The handle used to operate the upper frame is also the clamp which locks the frames together, and as this is operated with one hand, the locking and unlocking is done very rapidly.

The frame is equipped with a vacuum gauge and the vacuum in the frame can be regulated to any desired pressure.

The frame is very rigidly built.

ROBERTSON VACUUM PRINTING FRAME
Complete with vacuum blanket, vacuum gauge, motor, pump and motor control
TO TAKE PLATES UP TO

11 x 14"	\$175.00	32½ x 43"	\$315.00
14 x 17"	200.00	37 x 48"	320.00
16 x 20"	210.00	39 x 50"	350.00
20 x 24"	230.00	42 x 54"	355.00
22 x 28"	250.00	45½ x 54"	370.00
26 x 30"	260.00	46 x 55"	375.00
25½ x 36"	270.00	40 x 60"	375.00
28 x 36"	275.00	50 x 66"	600.00
30 x 40"	300.00	50 x 70"	650.00
34 x 38"	305.00		

Illustration shows a timer. This can be furnished with a contractor for operating arc lamps at additional charge shown below:

Price additional for direct current	80.00
Price additional for alternating current	\$60.00

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RUBBER BLANKETS FOR VACUUM PRINTING FRAMES

Plate Size	Price	Plate Size	Price
20 x 24.....	\$23.00	36 x 48.....	\$ 62.50
21 x 26.....	25.00	40 x 50.....	72.00
22 x 28.....	30.00	46 x 56.....	87.50
26 x 30.....	37.50	48 x 60.....	110.00
26 x 36.....	41.00	50 x 70.....	130.00
28 x 36.....	45.00	54 x 74.....	145.00
30 x 40.....	50.00	60 x 80.....	175.00
34 x 44.....	55.00		

When ordering: If the blanket is for our printer, specify **Plate Size**. If for other than our equipment write for our blank blueprint. Fill in the dimensions and return to us.

WATER-SOFTENING EQUIPMENT



Research by the Roberts & Porter Laboratory led to the development of the water-softener shown in the above photograph. Each unit sold is charged with the proper chemicals to counteract the particular condition of the account purchasing this unit.

Due to a wide variation of water conditions, the prospective buyer should forward a sample of his water, in a clean and sterile bottle, to the Chicago office of Roberts & Porter. The sample will be given a thorough analysis as regards lithography needs and the proper corrective charge will be inserted into the larger tank.

Price depends upon the percentage of impurities to be removed per thousand gallons of water — but generally averages approximately 300 dollars F.O.B. Chicago, Ill.

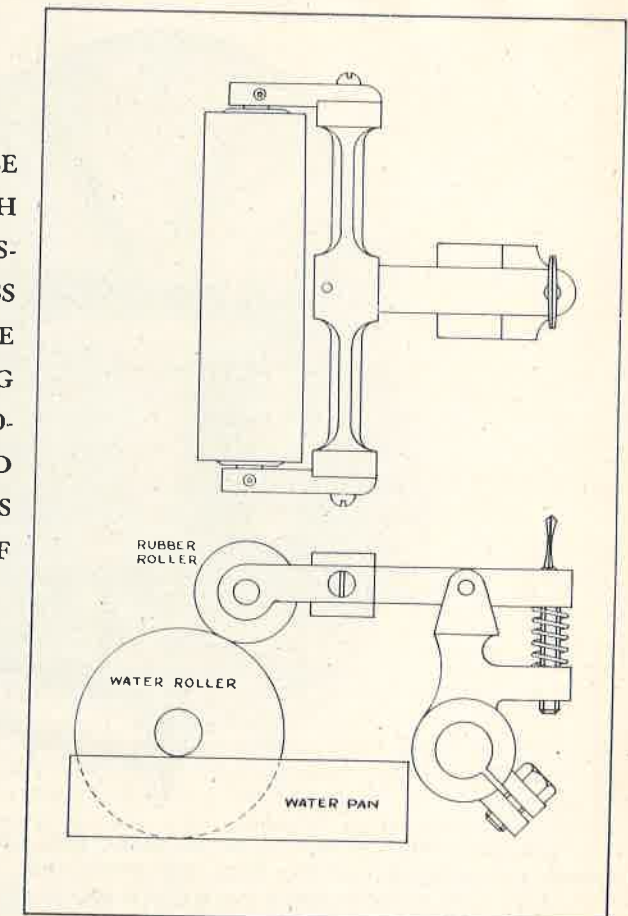
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Baldwin

WATER STOPS

ARE EFFICIENT BECAUSE THEY CAN BE SET WITH VARYING SPRING PRESSURE FOR MORE OR LESS WATER FEED AND CAN BE SET AT ANY PLACE ALONG THE ENTIRE DAMPER MOTION AS BAR TO HOLD STOPS IS PLACED ACROSS THE ENTIRE LENGTH OF WATER MOTION.

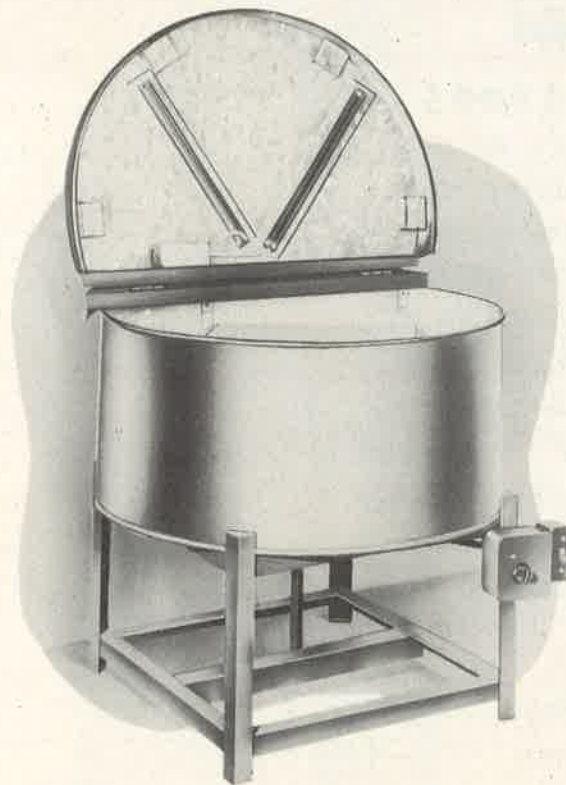
PRICES
QUOTED
UPON
REQUEST



VERY SIMPLE TO INSTALL AND OPERATE

Over Fifty Years of Service to the Graphic Arts

BROWN LITHO PLATE WHIRLERS



The Litho Plate Whirler is of all welded steel construction. Tank and cover of heavy best quality sheet metal, fitted with curved brass sprinkler pipe and cut off valve. When pipe is not in use, it swings back against the side of the tank conforming to its curvature, at the same time operating valve which shuts off water. Cover sufficiently ventilated to permit ample circulation of air and eliminate moisture. Strip heating elements are installed in the cover spaced and sloped so as to evenly diffuse heat over the entire plate and eliminate hot spot. Number of heating elements varies as to size of whirler and area of plate.

Covers on large sizes are counter balanced. Stand of welded angle iron. Belt drive and variable speed adjustments are among its appointments. Entire outfit finished attractively in grey enamel.

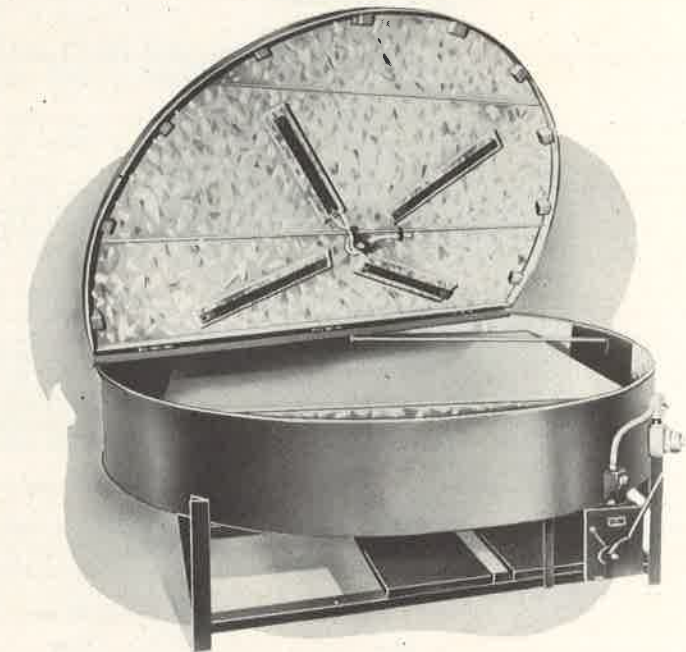
BROWN LITHO PLATE WHIRLERS

Complete with strip heaters, water sprinkler, and variable speed motor and control:	
16 x 20 No counter-balance, 2 strip heaters.....	\$185.00
20 x 24 No counter-balance, 2 strip heaters.....	265.00
22 x 28 No counter-balance, 3 strip heaters.....	290.00
26 x 30 No counter-balance, 3 strip heaters.....	315.00
28 x 36 No counter-balance, 3 strip heaters.....	360.00

When ordering, give current specifications, voltage, phase and cycle.

Over Fifty Years of Service to the Graphic Arts

BROWN LITHO PLATE WHIRLERS



The Litho Plate Whirler is of all welded steel construction. Tank and cover of heavy best quality sheet metal, fitted with curved brass sprinkler pipe and cut off valve.

When pipe is not in use, it swings back against the side of the tank conforming to its curvature, at the same time operating valve which shuts off water. Cover sufficiently ventilated to permit ample circulation of air and eliminate moisture. Strip heating elements are installed in the cover spaced and sloped so as to evenly diffuse heat over the entire plate and eliminate hot spot. Number of heating elements varies as to size of whirler and area of plate.

Covers on large sizes are counter balanced. Stand of welded angle iron. Belt drive and variable speed adjustments are among its appointments. Entire outfit finished attractively in grey enamel.

BROWN LITHO PLATE WHIRLERS

Complete with strip heaters, water sprinkler, and variable speed motor and control:	
30 x 40 With counter-balance, 4 strip heaters.....	\$435.00
33 x 43 With counter-balance, 4 strip heaters.....	470.00
37 x 48 With counter-balance, 4 strip heaters.....	495.00
40 x 60 With counter-balance, 4 strip heaters.....	545.00
42 x 54 With counter-balance, 4 strip heaters.....	525.00
46 x 54 With counter-balance, 4 strip heaters.....	560.00
50 x 66 With counter-balance, 4 strip heaters.....	585.00
50 x 70 With counter-balance, 4 strip heaters.....	610.00

When ordering, give current specifications, voltage, phase and cycle.

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THE DOUTHITT LITHOGRAPHERS AND PHOTO-ENGRAVERS
PLATE WHIRLER
PATENTED

Plate makers have considerable trouble with ripply or uneven coating, which often results in production delays or inferior plates. To overcome these difficulties we have developed and now recommend the Forced Filtered Dry Air System for face up flowing and whirling.

The Dry Filtered Air System in conjunction with the smooth running direct motor drive enables the operator to obtain smooth even coated plates free from ripples or "thick spots" and reduces the duration of the whirling time to a great extent.

Other notable features of the whirler are: the fulcrum arm spring balanced cover which affords easy opening and closing of the chamber eliminating cumbersome balance weights; the swing type flush pipe, curved to coincide with the radius of the chamber, with swivel type self-closing valve keeping the water under instant control. The waste water is eliminated through the bottom which has standard fitting for connections to drain.

It is equipped with the gradual pick up variable speed motor of the Universal type directly connected drive, with graduated visible rheostat speed control. Simply turn the indicator to the speed required.

The forced feed dry filtered air unit is firmly attached to the chamber cover and is controlled by an independent switch separate from the drive motor. All air entering the whirler is filtered through removable pads which are easily replaced when dirty. The filtered air is dried and baffled by an electrical heating unit before it enters the chamber. The pressure is sufficient only to keep the dry air in motion over the entire surface of the plate without disturbing the coating, where it picks up the moisture from the coating and is discharged through the semi-open bottom. This action overcomes all the humidity in the chamber caused by flushing and coating thereby speeding up the operation.

The Douthitt Plate Whirlers are made in all sizes to accommodate the smallest engravers plate or the largest plate used by lithographers.

It produces correct, uniform, evenly coated plates. Easy to operate and a real time saver.

An electric automatic time clock controls the Heating and Whirling Mechanism and may be set to the required whirling time and automatically stops the machine when the time has expired. Red pilot light indicates when the machine is in operation.

With forced filtered dry warm air for quick even drying.

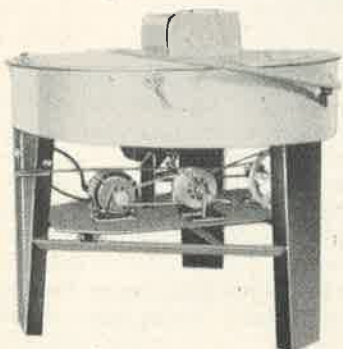


Plate Size	Price	Floor Space	Crating Charges
20 x 24	\$ 360.00	36 x 36	\$17.50
22 x 28	370.00	40 x 40	17.50
26 x 30	410.00	45 x 45	20.00
28 x 36	490.00	48 x 48	21.50
30 x 40	560.00	54 x 54	22.50
34 x 44	630.00	58 x 58	24.00
36 x 48	690.00	62 x 62	25.00
40 x 50	770.00	66 x 66	27.00
46 x 56	840.00	75 x 75	32.00
48 x 60	875.00	80 x 80	35.00
50 x 70	915.00	90 x 90	42.00
54 x 74	1,020.00	105 x 105	50.00

Prices based on 110 volt, single phase, 60 cycles. Extra charge for other currents. Order by plate size, specify current.

Bench Type Whirler With Air Dryer Open Top	Floor Type Whirlers With Cover, Heaters and Water Spray
11 x 14.....\$150.00	\$215.00
14 x 17.....160.00	235.00
16 x 20.....175.00	260.00
20 x 24.....200.00	275.00



Over Fifty Years of Service to the Graphic Arts

ROBERTSON PLATE WHIRLER



Uniformity of coating photo-engraving and lithograph plates is more essential than is usually thought. By coating plates in an automatic whirler, the solution is spread evenly over the entire surface, and the result is shorter printing time, accurate printing time and uniform prints.

The Robertson Plate Whirler can be run at any desired speed, the heat can be regulated and the plate is quickly handled in the machine. A water pipe is located against side of tank and when pipe is moved into position over the plate the water automatically switches on and when pipe is put back against tank the water automatically switches off.

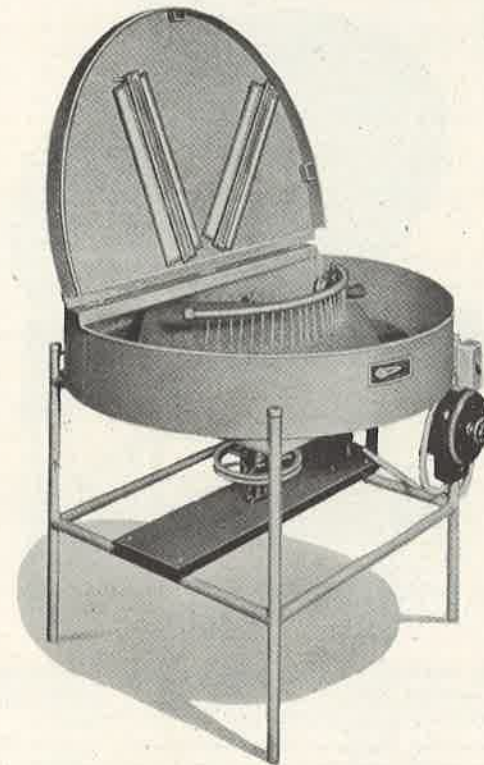
The cover is counter-weighted making it easy to raise or lower.

ROBERTSON PLATE WHIRLER
Complete with heat units, water arm and motor.

20 x24" No Counter Balance (2 strip heaters).....	\$375.00
22 x28" No Counter Balance (2 strip heaters).....	380.00
26 x30" No Counter Balance (2 strip heaters).....	435.00
25 1/2x36" With Counter Balance (4 strip heaters).....	585.00
28 x36" With Counter Balance (4 strip heaters).....	585.00
28 x42" With Counter Balance (4 strip heaters).....	650.00
30 x40" With Counter Balance (4 strip heaters).....	650.00
34 x38" With Counter Balance (4 strip heaters).....	650.00
32 1/2x43" With Counter Balance (4 strip heaters).....	700.00
37 x48" With Counter Balance (4 strip heaters).....	725.00
39 x50" With Counter Balance (4 strip heaters).....	800.00
42 x54" With Counter Balance (4 strip heaters).....	825.00
45 1/2x54" With Counter Balance (4 strip heaters).....	875.00
46 x55" With Counter Balance (4 strip heaters).....	875.00
40 x60" With Counter Balance (4 strip heaters).....	875.00
50 x66" With Counter Balance (4 strip heaters).....	910.00
50 x70" With Counter Balance (4 strip heaters).....	950.00

Over Fifty Years of Service to the Graphic Arts

ROBERTSON PLATE WHIRLER



Uniformity of coating photo-engraving and lithograph plates is more essential than is usually thought. By coating plates in an automatic whirler the solution is spread evenly over the entire surface and the result is shorter printing time, accurate printing time and uniform prints.

The Robertson Plate Whirler can be run at any desired speed, the heat can be regulated and the plate is quickly handled in the machine. A water pipe is located against side of tank and when pipe is moved into position over the plate the water automatically switches on and when pipe is put back against tank the water automatically switches off.

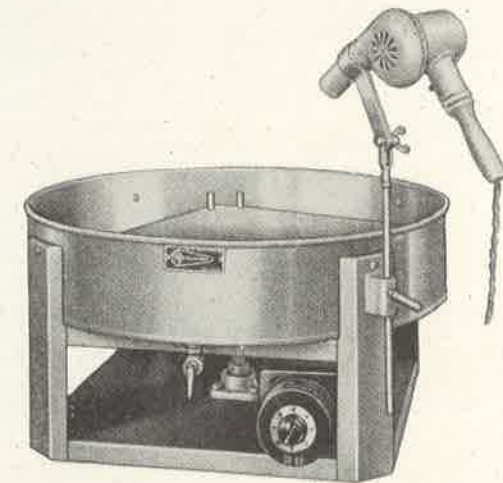
ROBERTSON PLATE WHIRLER

Complete with 2 heat units, water arm and motor:

11 x 14"	\$280.00
14 x 17"	325.00
16 x 20"	350.00
20 x 24"	375.00

Over Fifty Years of Service to the Graphic Arts

ROBERTSON PLATE WHIRLER WITH AIR DRYER



This type of whirler is used considerably for coating plates for small offset presses. The speed of whirling plates can be regulated to give any desired speed. By raising or lowering the air dryer, any desired heat can be secured. A faucet is attached for draining pan.

ROBERTSON PLATE WHIRLER
WITH AIR DRYER AND MOTOR

11x14"	\$190.00
14x17"	200.00
16x20"	220.00
20x24"	250.00

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